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AMERICAN JOURNAL OF INSANITY.

JULY, 1895.

MEDICAL WORK IN WARDS OF HOSPITALS FOR THE INSANE.

BY P. M. WISE, M. D.,

Medical Superintendent of St. Lawrence State Hospital, Ogdensburg, N. Y.

When I was invited to prepare a paper upon the subject of medical work in hospital and asylum wards it occurred to me that this included all the medical work of hospitals for the insane. I can not expect you to listen patiently to a review of the usual requirements of a medical department of an asylum, and I will, therefore, present to you some suggestion of methods that tend to give more distinctly the hospital character to our wards, and thus remove them farther from their character as detention places. This alone is a great subject, and I do not expect to exhaust it, but I hope it will form a basis for a free discussion to follow.

There are three important elements that enter into the treatment of an insane person in a hospital for the insane: (1) The medical officer, whose relations are closer to his patient than that of the family physician; (2) the nurse, and (3) the ward, with its appliances; and this should include the whole environment of the patient. These are not given in the order of their importance, for the nurse rationally stands at the head, although her efficiency depends largely upon her training and direction, and this depends upon the physician. This classification of remedial agencies might be infinitely subdivided, but for our present purposes it is unnecessary, and would be superfluous.

There are also three important periods in the hospital history of every new case: (1) The admission and examination; (2) the treatment during the acute stages, and (3) the termination, either by recovery, death, or chronicity. This applies not only to cases of generalized insanity, but to all new admissions, whether they are in acute stage or not, until their condition—mental and bodily—becomes thoroughly determined and recorded.

The examination and treatment of the patient in nearly all public hospitals for the insane devolves upon an assistant physician, the medical superintendent acting in the capacity of a counselor, either in all the cases received, or in those of unusual interest or severity of disease, or with complications. Hence it is necessary that the assistant physician should be capable, and should be qualified by education and training for this special work; that he should be governed by well-defined methods of procedure, for which the medical chief is responsible, and that he should not be burdened with non-medical duties. Allowing that insane hospital physicians, as a class, are superior men, and those who gain advancement are selected men, it must be admitted, with regret, that sometimes the temptation of a humdrum daily routine is not resisted, and they become medical automatons in the matter of their inspection and treatment of patients and in their ward duties. Occasionally a brilliant, active, and sanguine assistant, bent on original research, will flame across the medical firmament of a hospital, but too frequently like a comet without an orbit. But in other instances, with a definite goal, and with loyalty to well-matured and precise methods, the assistant develops into the scientist, and his department becomes not only a hospital in name but in fact.

The medical chief is largely responsible for the development and progress of his assistants. Upon his discernment and sagacity rests very largely the character of his staff, not only in original selection, but in their development. As a rule, the assistant physician enters upon his special work before he reaches the "climax of initial fecundity," in other words, during the period of psychical evolution, and the impressions and tendencies he absorbs at that time are likely to become elements of his organization as it relates to his chosen work.

I believe that medical superintendents do not confer with their assistants regarding their medical work as frequently as they should. At the St. Lawrence State Hospital the medical superintendent meets his physicians daily in conference after their morning work, between the hours of 12 and 1, noon, and I am inclined to believe this daily experience meeting of an hour is of infinite value. At any rate it might be made so. It is not uncommon for a superintendent to find that an assistant has outstripped him in scientific attainments, and that Gamaliel can properly sit at the feet of Paul. This should not be a matter for regret.

The training of young medical men by an interne service before

charging them with independent responsibility is of great value, and should be generally adopted. In New York each State hospital is allowed two internes, but this number is not sufficient to supply the requirements. There should be as many internes as there are assistant physicians. Between the nurse and the medical officer the interne can perfect the link of clinical evidence that requires time in greater proportion than special skill.

There is always a paucity of physicians in our public hospitals. In wards for recent cases, there should not exceed one hundred patients for each physician, and if the ward classification is quite strictly confined to recent cases, the number should not exceed fifty. Fortunately, in the larger hospitals, the medical force is large enough to provide for an exigence in the service for acute cases.

The assistant physician should be relieved as far as possible from clerical work, and duties that are not of a medical nature. Ward government and hygiene is properly a medical duty, and can not safely be separated from the medical service, but case writing and recording should be delegated to clerks, the physicians dictating to a stenographer. The conventional case-book has no place in the true medical work of the hospital, and is maintained, chiefly, because it is a requirement of law. It becomes a repository of facts for statistical purposes and an epitome of incidents in the history of the patient. It is useful as a reference book, and can be maintained as such, but as a medical record it is insufficient. The clinical record should contain the medical history of the patient, and this should chiefly be the work of nurses, as I will shortly explain.

I believe it is unwise to separate the pathological and clinical work in our hospitals; and consequently the practice of maintaining a special pathologist as an independent functionary is to be deprecated. The physician whose relations, clinically, to the case were the closer, should be the interpreter of the morbid appearances. He can not be so unless he holds the position of master in the manipulation of the morbid tissue. There can be no objection to giving him the assistance of expert manipulators thoroughly acquainted with technique, but their relation to the case should be mechanical. They should hold the position of assistant to the physician, instead of the physician being occasionally favored by the pathologist with a glimpse into his sacred precincts. When I find my colleagues resorting to the laboratory in their recreational hours, I feel that their spirit of research requires no assistance.

The nurse is the more important element in the treatment of the patient, not only because she is the immediate agent to carry into effect the prescribed treatment, but as the direct and constant witness upon whom the physician depends for the bulk of his information. Consequently, she should be efficiently trained, as much for the observation, detection, and the proper recording of all symptoms, as for the management of the patient. I use the feminine pronoun purposely, for I believe that the time is not far distant when women will displace men in the care of the large proportion of insane men who are not violent or erotic. We have had nearly a year's experience with women as the sole attendants in two of our more particular wards, and their success is not only marked, but they are eminently pleased with their work. A previous experience with a mixed service—part men and part women—was not a success and was abandoned. We are contemplating the organization of a new building for male patients with women nurses alone.

The training school is such a universal adjunct of an insane hospital that a reference to it is sufficient. From such evidence as I have, I believe our training schools in insane hospitals lose in comparison with the general hospital training schools, in failing to give a thorough bedside clinical instruction; hence, there should be hospital wards quite similar in their appliances and conditions to a general hospital ward, in which there should be required a term of service of all students of the training course, under constant and effective instruction. Lectures and recitations are very well, but practical bedside instruction is of greater importance. Nurses that have come to us from other schools, we have found quite incapable in clinical observation and recording, without further instruction.

Like physicians, there is usually too small a proportion of nurses in public hospitals, for economic reasons, but with increased enlightenment of legislators this fault may be remedied.

The ward and its appliances is the least important element in the treatment of an insane person. Given an enlightened physician, and intelligent and well-trained nurses, the structural arrangements of any of our hospitals are efficient to obtain desirable results in the treatment of acute cases. The ward environment in any design can be adapted to requirements, if crowding can be prohibited, and this is absolutely essential. A large proportion of cases of generalized insanity in the acute stage should have isolation, and this may be expedient or not, in accordance with the structural provis-

ion made for it. In the modern hospital adequate hygienic conditions prevail, and provision is made for convenient hydro-therapeutic treatment. The wards for the recent cases should be the nearest to the medical officers, and should be easy of access. It is now generally admitted that nurses should not live upon the wards, but should have periodic repose in some other building than the one in which they are engaged.

The reception and examination of a patient is a most important period in their hospital history, both as regards the impression upon the patient and in establishing proper treatment at the outset. It is undoubtedly advantageous to have receiving wards where the patient should meet the physician and nurse, and from whence a transfer will not be required — the patient remaining upon the ward where received. The initial impression of the hospital often remains and influences their future, either for good or otherwise, and it is requisite that this impression should be as favorable as it can be made. Hence the nurse engaged in the reception of a patient should possess tact and a large fund of common sense in addition to her training. The physician will endeavor to make an early impression of honest dealing, which often requires the exposure of duplicity on the part of relatives. The exhaustion of travel may render the patient unfit for a detailed examination, and it is good practice to delay the critical examination until the patient has had repose. Urgent conditions may require an immediate examination and treatment, but as a rule the nurse can take the patient in charge and report to the physician the temperature, pulse, weight, and condition of the skin. The assignment of the patient, upon reception, to a nurse whose specific duty it will be to aid the physician in a careful observation of symptoms, I believe to be of the greatest importance. The clinical record of every case should be started at once, and trifles should be recorded. Every new arrival should be placed in bed to await the examination by the physician. The examination should be exhaustive, as regards the bodily and mental condition, and no attempt at classification or diagnosis should be made until this is completed and digested. The condition of every organ and all the excretions should be ascertained. An important examination is that of the blood, with reference to the hæmoglobin, proportion of red discs and leucocytes, and in many cases its proper staining and mounting to ascertain intracellular conditions. The circulation and condition of the arteries should be carefully noted, and I hope the time is not distant when every medical officer will

consider his examination incomplete until he ascertains the state of the retinal vessels and circulation and the field of vision. The routine examination should also include the reflexes, electrical reactions, and the discovery of all complicating neuroses, if they exist. The antecedent history of the patient in full is desirable, when it can be obtained, which is seldom. It is remarkable how little the family physician appreciates signs that to the psychiatrist are of the utmost importance. Until psychiatry is taught with greater assiduity in our medical schools, we can hardly look to the general practitioner as a scientific ally in our special branch of medicine.

Whatever the antecedent history of the case or the preliminary examination may indicate, every new admission should pass a period of critical examination and observation, and a positive diagnosis should be arrived at, and all complications determined, before the classification is settled. One of the most unscientific procedures is to classify a case as chronic, and probably incurable, upon the evidence of the history furnished with the case—in most instances imperfect—and upon a superficial examination at the time of admission. Equally unscientific is the continued expenditure of valuable time upon the mass of terminal cases that crowd most of our institutions, where the bodily functions have regained a normal state, and the mental condition is uniformly characterized by its organic cachexia. I am not one to underrate the importance of having all classes of insane under skilled observation and care; but I maintain that the medical staff of a hospital should devote its chief energies to the class of cases in which curability is a possible result, and that this should be a general function devolving upon all members of the staff, irregardless of their domestic location or their fixed governmental duties. I urge constantly upon my staff of physicians the importance of keeping watch of the new cases; if not engaged in their immediate care, to study and criticise the conclusions and treatment of the medical attendant. The healthiest indication of a medical service is the exercise of the critical faculty. The asylum rut must be avoided. It is not a bugaboo; it is sometimes a reality destructive of every scientific impulse, but it is not the universal condition that Doctor Mitchell would have us believe.

The period of treatment during the acute stage, and in doubtful cases the period of watchful and recorded observation, brings into exercise the active and highest function of the hospital, represented by its three important elements—the physician, the nurse, the ward and its appliances. This is equally true of a general and of

an insane hospital, and the distinction between the two, in a medical sense, should be slight. The mental complication of the case should not disturb the hospital methods, and in fact the only element requiring modification by reason of this complication is the ward and its appliances. So far as safety and that feature of treatment that engages object-consciousness is concerned, certain modifications of and in the ward will be required. These are familiar to you. In all other respects the general hospital standard should apply.

The physician's directions for treatment should be intelligently and absolutely executed, and the physical and mental symptoms of the patient should be accurately observed and fully reported. There can scarcely be any question for controversy in this proposition, and I think I may safely aver that therein lies the pith of all the improvement in insane hospital methods of recent times. The improvement in personal attendance, and in nursing of the insane by intelligent and trained nurses, has made it possible to put the treatment of an insane person upon practically the same basis as the treatment of disease without mental complication.

Perhaps the greater source of complaint of our hospital methods, from the medical outsider and the medical insider, is in regard to case records. The hospital physician finds that to keep complete records of his clinical work consistent with its importance, even with the aid of a secretary, is a permanent drain upon his hours. The outsider complains that the hospital records, in a medical sense, are of no value, as they do not present detailed symptoms of a minor character that have an important meaning. Where clinical recording depends wholly upon the physician, I believe this criticism is valid.

The method of clinical recording I shall now particularize. I believe it to be ideal, and in order to be as explicit as possible in a few words, I will describe its application. As before stated I hold that the usual case record should be confined to the requirements of law, contain useful statistical information and an epitome of changes and incidents in the life of the patient. Under the direction of the physician these records can be relegated to clerks. The important medical record should be made upon the wards and it should begin with admission. The form of these records is a matter of convenience, and is not a vital question. The object to be attained is detail in symptomatology, and in avoiding the duplication of work, hence the original notes should become the permanent

medical record of the case. At the St. Lawrence State Hospital, for expedient purposes a series of forms have been adopted, a copy of each of which I herewith submit. The nurse records every incident of the case, every symptom as it is manifested. As the physician is engaged in his examination the nurse becomes his secretary. The physician's memory of clinical data does not become thereafter a factor in the case. The physician writes his prescription—the nurse copies it upon the record. The physician's directions are recorded. Charts show fully and quickly, at a glance, series symptoms. It is remarkable to what extent charting can be utilized in clinical work. My assistants chart the temperature, food consumption represented in units, amount of sleep in hours, conditions of the blood and urine, and mental symptoms. Diagrams represent topographical invasions. The clinical record at once presents to the attending physician and his colleagues a mirror of the case since admission, in an intelligent form, easy of comprehension and at the bedside. It eliminates errors the result of a lack of information. With the termination of the case the sheets, making a complete clinical history, are filed for easy reference, and from time to time they are bound in volumes. If the indexing is done by the improved card catalogue, nothing remains to complete convenience of reference, and the work can be accomplished in this perfect manner with relief to the physician and with immeasurable benefit to the nurse and patient. The medical interne's duties lying between the nurse and the physician, he performs the case work that goes to the laboratory, and a laboratory sheet becomes a part of the case record.

The application of mechanical and physical treatment is sometimes a vexatious question, owing to the usually small proportion of nurses who are qualified in all respects to administer it, and to the distribution of patients for other purposes of classification. Under a competent teacher, the training school should furnish a sufficient number upon whom should devolve the massage, Swedish treatment, administration of electricity and balneotherapy, as a feature of their course. It is a good and safe practice to designate nurses to these several duties for a specified period, with a requirement to execute them for a department, instead of confining them to a ward duty. The instructor would necessarily have to be satisfied of their efficiency, but nurses in course of training could give an apprentice service as assistants, and thus be prepared when their turn came as direct agents. An absolute requirement is the prescription of phys-

ical treatment in as precise terms and measurement as the direction for medicinal treatment. This is not at all difficult. The galvanometer in electrical treatment; varieties, time, and location in massage; temperature and time in baths, all permit direction with precision. Gymnasium work should be in the hands of a master competent to recognize symptoms of fatigue. The physician must constantly satisfy himself of the competency of his agents who carry into effect these important remedies.

The stimulation of object-consciousness, or the so-called moral treatment, is a function of the insane hospital not required of the general hospital. It does not require any words of mine to impress you with the importance of this class of medical work. The means employed are innumerable, both to modify morbid sensorial impressions and to produce new sense impressions. The psychiatrist must not only be a physician in the ordinary meaning of the term, but he must have a reliable apprehension of essential domestic felicities and of avocational impulses, that he may opportunely place his patient under conditions where mind impressions will aid recovery.

LESIONS PRODUCED BY THE ACTION OF ETHYL ALCOHOL ON THE CORTICAL NERVE CELL—AN EXPERIMENTAL STUDY.*

Preliminary Note, by HENRY J. BERKLEY, M. D., Baltimore.

During the past year a series of experiments were made in the pathological laboratory of the Johns Hopkins University by Doctor Friedenwald, under the direction of Professor Welch, upon the *intra vitam* action of absolute ethyl alcohol upon the adult rabbit. A large number of these animals were fed for periods varying from six months to over a year upon diluted alcohol in the quantity of from five to eight cc. per diem. The animals gradually lost weight, and five of them finally died, nearly all in convulsions. The brains of these animals were sent to me for examination, two of them preserved in alcohol, the others in Müller's fluid.

The two series of specimens were treated by different staining reagents, the alcohol ones by Nissl's method, those from Müller's fluid by a new process of silver staining—the phospho-molybdate of silver in free nitrate of silver—by which the finest dendrites are tinged with certainty and uniformity.

Very slight abnormal alterations were found in the vascular walls in the alcohol specimens, principally a rather indefinite multiplication of the nuclei of the intermediary vessels, slight thickening of the walls, a few grains of hematoidin in crystals in the surrounding lymph space, and also an occasional hemorrhage into this space. More definite was a dilatation of the lymph space surrounding the blood-channels, and some density of the hyaline border.

Beyond some disorganization of the arrangement of the chromophile particles in the bodies of the cortical cells, especially in the pyramidal, the nuclei of the nerve cells show most decided changes and departures from the standard established by our control preparations. The most prominent of these alterations are seen in the central nucleolar figure, for in the place of the smooth dot in or near the center of the nuclear ring, it now appears roughened, spongy, or even with elongated projections from the surface. Not only is the nucleus roughened, but it is also considerably enlarged, occupying from an eighth to a sixth of the interior of the nucleus, the projections extending to the periphery. In the clear karyoplasma

*From the Anatomical Laboratory of the Johns Hopkins University.

there is also a decided tendency to take up more than usual of the nuclear stain, and the body is much less refractile than natural.

The lesions found in the three brains fixed in Müller's fluid were perfectly similar.

We adopted for the standard cell of this research the pyramidal cells of the old second and third laminæ, for the reason that in the normal cortex these cells are always of fixed and definite exterior, so far as the dendritic and axis-cylinder processes are concerned, and the slight variation in the size and form of the body is always within already known limits.

In the rabbit's cortex stained by the new process, we find that after all possible allowances have been made for artifacts and physiological variations, together with inequalities in staining, there remain a large number of cells in the alcoholic brains that are distinctly abnormal. It is extremely difficult to determine the approximate proportion of neurons that are normal and neurons that may be definitely held to be abnormal, from the fact that but a small proportion of the total number of all the cells in the layers of the cortex are at any time stained. Perhaps it would be safe to conclude that one out of every three or four cells show departures from the normal in some form, though the percentage is probably higher.

The alterations in the pyramidal cell being taken as the chief exponent of the type of lesion due to the effects of alcohol, we find a large number of these bodies having on their protoplasmic extensions tumefactions of varying size, some so small as to require close attention on the part of the observer to see them, others large enough to attract immediate notice. This process of swelling seems to begin near the fine, free extremity of the dendron, either at the point of the apical process or on one of the collateral branches, and then, as the destructive process increases in intensity, numerous moniliform swellings spread over the branches.

The tumefactive alteration of the dendrons is accompanied, or preceded, by a peculiar change in the lateral buds of the dendrons. These gemmula immediately begin to disappear wherever the swelling commences, and attention is at once drawn to them by the thinner appearance of the protoplasmic processes.

Few of the cells of the rabbit's cortex exhibit more serious changes than those already described, but occasionally a neuron may be found which shows a more advanced degree of degeneration. Now the processes immediately adjacent to the body are roughened and seamed like the coarse bark of a tree, the staining of the altered

protoplasm is irregular, the cell body is shrunken, the basal dendrites no longer stretch over wide areas like their normal fellows.

The axis-cylinders of all the cortical cells were found to be perfectly normal, but the continuance of the axon when the other portions of the cellular structures are far degenerated is one of the peculiarities of the neuron which has before attracted attention. The collaterals are also perfect to their endings.

Practically the same alterations were found in the Purkinje cells of the cerebellum as in the cerebral cortex, though the changes are more striking from their relative intensity. The loss of the lateral buds, from their greater luxuriance, was extremely impressive; they disappear from the dendritic branches as an entirety, and on a considerably degenerated nerve body not a single one can be found. The finer stems of the dendrites also undergo atrophy and in a great measure disappear. Only thick stems are now seen arising from the body of the cell, which give off a number of short, stumpy branches, thickly studded with knotty projections, in place of the long, feathery dendrites and their terminal twigs.

The neuroglia structures, both in the cerebrum and cerebellum, are apparently normal.

As the arterial changes found were comparatively unimportant in their character, it would appear difficult to ascribe this widely extended and curious process of tumefaction of the dendrites and disappearance of the gemmula to nutritive changes, solely from a defective supply of nourishment to the nerve cell, though truly the definite enlargement of the perivascular spaces would indicate that there was some previous disturbance in the circulation of the lymph currents of the cortex. It would seem much more plausible to attribute the lesions to the direct action of the poison on the protoplasm, though why it should take this peculiar form of swelling is most difficult to determine. The alteration can hardly be of fatty nature, as the bodies of the unstained cells show nothing of this nature beyond the ordinary amount of yellow pigment grains, which in the rabbit is minimal. We do not for a moment consider these alterations of the neuron peculiar to the effect of alcohol, but regard them as capable of being reproduced by any irritant acting for a considerable time upon the living protoplasm of the nerve cell.

One point is made definite by this study: the fact that the alcohol, which was supposed to be the least deleterious of all the series, exerts a very definite and destructive effect upon the nerve cell.

JEMIMA WILKINSON, "THE UNIVERSAL FRIEND."

BY HENRY P. FROST, M. D.,

First Assistant Physician, Willard State Hospital, Willard, N. Y.

The following account of a personage who, in her day, made no inconsiderable stir in the world, although now surviving only in the local traditions of a small country community, is prompted by a belief on the author's part that it can not fail to be of interest to the readers of a "journal of insanity," exemplifying, as it does, a distinct type of mental disorder; and also affording another instance of the ease with which, under certain favorable conditions, now, happily, rarely encountered, large numbers of presumably sane individuals can be made to imbibe the delusions of an insane person. In deciding at this distance, in point of time, upon the question of the insanity of the person under consideration, we are hampered by the entire absence of any direct medical evidence, either pro or con, and we labor under the further disadvantage of having for reference only the history of her life as recorded by a pronounced partisan of the opposite side of the case.* However, the writer in question is entitled to our sincere thanks for the very thorough manner in which he has handled his subject, and for the clearly defined picture which he has drawn of this remarkable woman, without which no inquiry into the state of her mind would now be possible. It has been my good fortune not only to come across a copy of this rare volume of memoirs, but also to enjoy the acquaintance of several persons well informed in the history of Jemima Wilkinson as it has been handed down, along with some cherished articles of her personal property, in several families resident in the neighborhood once hallowed by her presence. A brief recital of the main facts in our heroine's history will first be in order, after which it will remain to show that, notwithstanding the ingenuity and the firm persistence with which she followed out, during many years, a certain definite plan of action, and notwithstanding the success which she attained in her career before the public, she was, nevertheless, plainly insane.

Jemima Wilkinson, the eighth child in a family of twelve, was born in the town of Cumberland, Providence County, R. I., in the year

* Memoir of Jemima Wilkinson — Anonymous — Bath, N. Y., 1843.

1751. Her father was a farmer of small means, a man of excellent character but little education, said to have been chiefly distinguished for the obstinacy with which he clung to preconceived opinions, and for the open contempt in which he held all of the polite accomplishments.

The one point in his life pertinent to our present inquiry is the fact that he died, at an advanced age it is true, in a state of melancholia induced by the death, years before, of his wife. The wife seems to have been a woman of strong character and sweet disposition, an exemplary housewife, and in every sense of the word a good mother to her numerous children. She died when Jemima was eight years old, and thereafter the subject of our sketch, already somewhat of a Tartar to manage, and already showing traits lacking in the other children, had practically her own way in the household. Her father made no attempt to bestow any education upon his girls, further than to have them instructed in the ordinary processes of housekeeping, and as these were the very things most repugnant to Mistress Jemima, and to escaping which, either by coaxing or bullying her sisters, she devoted a good share of her energies, it is not to be wondered at that she grew up a wild, headstrong, undisciplined girl. She was early recognized as the beauty of the family, and was also considered its brightest member intellectually, but, although her brothers and sisters admired her on account of her wit and beauty, and perhaps stood somewhat in awe of her, it does not appear that she was especially beloved by them.

As Jemima grew to womanhood she evinced an excessive fondness for dress and admiration, and such was her imperious disposition she could brook no rivalry; consequently, though caring little in reality for the young men of her acquaintance, she constantly exerted herself to distract their attention from other girls and add them to her own coterie of admirers, in which endeavor, owing to her superior charms, both personal and intellectual, she was in large measure successful. At this period of her life she often declared that *she* was not subject to any authority; that she had but one life to live and she intended to spend it in ease and pleasure; fools might work and drudge, but for her part she was going to have a gay time and do as she pleased. So things went along until the summer of 1774, at which time Jemima was twenty-three years of age. In that year there sprung up in her neighborhood a sect of religious fanatics styling themselves "New Light Baptists," or "Separators," the latter designation indicating that they had sepa-

rated themselves from all existing denominations. By their furious zeal and the wild abandon with which their meetings were conducted, a considerable interest was excited among the country people, and many who were not in any degree inclined to unite with them, but attended their meetings out of curiosity alone, finally succumbed to the prevailing excitement and joined in the more or less disorderly demonstrations. The fierce fire of enthusiasm soon burned out, however, and the organization fell to pieces within a year, leaving but the faintest of marks upon the page of history. Among the number who at first attended these meetings from curiosity, was our heroine, *Jemima*. She went again and again, and grew more and more interested, until she finally discarded altogether her gay and careless attitude, and became earnest and serious in her conversation and deportment, and no longer cared for the temporal pleasures which had formerly claimed so large a share of her attention. Not having evinced any riotous degree of religious fervor, *Jemima* was not at any time regarded as an actual member of the society, but after the collapse of the Separatists, instead of returning to her former ways, as many of the active members did, she continued to prefer the contemplation of religious subjects. She shunned society as vigorously as she had once courted it; she grew even more sober and reserved, and it became more and more her habit to seclude herself with her Bible, which she now perused almost constantly. Two years of this altered life wrought a decided change in the once gay and buxom girl. She was now pale and thin, silent, serious, and abstracted; apparently a confirmed recluse and as unsocial a creature as can well be imagined. About midsummer of the year 1776 she secluded herself altogether in her room, and even kept her bed for protracted periods. Her sisters, becoming seriously alarmed at this, called in the family doctor, who, after several careful examinations and upon the assurance of the patient that she desired neither his services nor his presence, declared that she was not suffering from any bodily disease, but was merely controlled by some strong delusion.

This opinion was accepted by the family, and it was agreed that no further attentions were to be lavished upon the self-styled invalid, in the hope that she might finally see the propriety of conducting herself in a more rational manner. Instead of improving, however, she seemed to grow steadily worse until, after a while, such was the apparent seriousness of her condition, she not only had the constant attendance of her sisters during the day, but the

kindly offices of neighbors were called into requisition and she had nightly watchers at her bedside as well. She now began to speak of having wonderful visions, and claimed to be in frequent direct communication with the heavenly powers. During the long hours of the night, instead of sleeping, she entertained her nurses with enthusiastic descriptions of the marvelous things which were manifest to her, and attempted, in the most solemn and earnest fashion, to point out to them the ghostly visitors who, according to her, filled the apartment. Some she frightened nearly out of their wits, while upon others her stories had no effect except to convince them more firmly than before that the girl's mind was unbalanced. Finally, one night in October of this same year, the climax was reached, when, after a more than usually earnest attempt to impress her ideas upon the two women who sat with her, she went into a kind of trance and lay to all appearance lifeless for several hours, her face colorless, and the respirations so soft as to be barely perceptible upon the closest scrutiny. At the stroke of midnight she awoke, as if from a refreshing sleep, and in an authoritative tone demanded her clothing. This, after some argument, was given to her, whereupon she immediately arose and dressed herself and went about among those present, evidently in as good health as any of them, barring a certain degree of weakness consequent upon her long confinement to bed. She informed her hearers that she had passed the gates of death and was come anew upon earth; that Jemima Wilkinson had died, her soul had ascended to heaven and, in fact, was still there; that the body which her soul had formerly inhabited was reanimated with the power and spirit of Jesus Christ, who had now for the second time come upon the earth; that this was the eleventh hour and the last call for repentance, etc. She claimed that there had been a cry throughout heaven, "Who will go and preach to a dying world?" to which she had replied, "Here am I, send me." Thereupon the Lord granted her request and immediately sent her forth on her mission, giving her the choice of returning after ten days, or remaining on earth a thousand years and then undergoing a bodily translation. To all who attempted to reason her out of these preposterous beliefs she replied calmly and firmly that she knew whereof she spoke, and that in due time her claims would be made good and her power manifest itself. To those who spoke to her as Jemima Wilkinson, and congratulated her upon her recovery, she replied that the person referred to was dead, and that she whom

they now addressed was to be styled "The Universal Friend." She was careful then and ever after, not to make any reference to father or mother, or brothers or sisters, and instead of calling her father's house "home," she now spoke of it as "the place where I am sojourning."

In spite of argument, entreaty, and ridicule, Jemima consistently adhered to all of the above tenets throughout her long and eventful life, and certainly if, as our author believes, she originally invented the whole story and subsequently acted a part for the sole purpose of gaining notoriety and a comfortable maintenance, she is at least entitled, in view of the skill with which she acted it, to an exalted position in the annals of charlatanry, deserving to have her name preserved alongside those of Apollonius, of Alexander of Abonotichus, of Cagliostro, and others of the most distinguished professors of the art, instead of being, as at the present time, consigned to oblivion, while mortals of more common clay are winning lasting renown by less heroic efforts. Before attempting, however, to decide how Jemima should be labeled for posterity, it will be necessary to continue our cursory review of her history. Having announced her mission, she lost no time before entering upon her labors. She went to church on the Sunday following her reported death and reanimation, and, after the regular service was concluded, gathered the people together in the churchyard and addressed them in a sort of lecture on the beauties of morality and virtue, saying nothing definite regarding her late supernatural experiences, but throwing out several hints sufficient to excite the curiosity of her audience. She concluded by inviting them to call and converse with her at "the place where she was sojourning." It was not long before the residents of the neighborhood availed themselves of this invitation in considerable numbers, so that after a few weeks her father's house was thronged every evening, and Jemima had plenty to do, preaching to them collectively and arguing with them individually. She never wavered in her story, nor abated in the slightest degree her claim to be the Savior of the world, but, with rare skill and perfect self-possession, continued to announce her divine mission; and so earnest was her behavior, so persuasive her tones, and withal, so fascinating her manner, and so invincible the glances from her dark eyes, that she met from the first with very encouraging success. Soon she was able to establish a society of her own, and by traveling into the adjoining counties, and even extending her travels into Connecticut and Massachu-

setts, everywhere preaching her peculiar doctrines, she was enabled to enlarge its membership to very respectable proportions within a few years. Wishing still farther to extend her operations, she determined to pay a visit to the Quakers in Pennsylvania, from among whom she hoped to gain recruits, and accordingly we find her in 1782 exciting no small degree of interest in Philadelphia, where she obtained the loan of a large Methodist church, and for some time preached regularly to large audiences. Here she made some proselytes, but, on the whole, had not much success, the city people coming in crowds to hear her preach, it is true, but not imbibing her doctrines so readily as the simple country folks. Continuing her journey as far as Worcester, in Montgomery County, Penn., she stopped there several months and established a flourishing branch of her society, to which, indeed, she afterward found it expedient to transfer her headquarters, in consequence of an unfortunate misunderstanding with the legal authorities in Rhode Island. Being sadly in need of funds, she had yielded to temptation, and, with a worthy sister of the society who happened to be in the service of the State Treasurer, had obtained access to that official's strong box and appropriated a matter of two thousand dollars. This affair came near terminating her public career, but as several persons of prominence were more or less implicated in it, an adjustment was finally effected without a criminal prosecution, and Jemima escaped with no greater penalty than the defection of her congregation in that State, where she never dared show her face again. In 1789 she finally put into execution a plan which had long been under consideration, and, with her prime minister and cabinet, and a few devoted adherents, removed herself and all her belongings to a tract of land she had purchased in Western New York, situated in what was then Ontario, now Yates County. The settlement was named Jerusalem, and the perpetuation of this name, still applied to the township, is likely to be the sole reminder to future generations that such a character as the Universal Friend ever existed. Here, removed from the scrutiny of an unbelieving world, and from all the distracting influences of civilization, Jemima's affairs flourished anew. She had the gratification of seeing the society augmented by the arrival of some old friends from Rhode Island and other places, who, with those from Pennsylvania, and a few new converts gathered in the sparsely settled region about her New Jerusalem, swelled the membership to something like a hundred souls. A choice parcel of land was set aside for the

use of the Friend ; a large log house, much more pretentious than the dwellings of her followers, was erected thereon, and she was installed in what was to be her home for the next thirty years—the residue of her life. During all these years she maintained her sway over the community, preaching to them every week, and enacting laws for their conduct, even in the most private family matters. Under pretense of being able to read the thoughts of men, and thereby detect, unaided, their most secret misdeeds, she terrified them into obeying her commands, no matter what they might be, and, as a matter of fact, many of them were extremely arbitrary. Marriage she absolutely forbade, though not, it is said, until she had herself suffered disappointment and loss of honor at the hands of a British officer, whose acquaintance she had formed at Newport in the early days of her ministry.

Her lands were tilled by the members of her flock, who needed no prompting to make them render this service, but cheerfully harvested her crops, even while their own remained uncared for; and to eke out her revenue, or to increase her stock of personal property, she had only to fix her glance upon any desired article and say, "The Lord hath need of this," when it would be immediately surrendered to her. In this wise, in ease and plenty, high in the estimation of her adherents, and without further peregrinations or annoyances of any sort, lived Jemima, as we have said, for thirty years, until 1819, when, to the consternation of her followers, she succumbed to a dropsical complaint and incontinently went the way of all flesh, leaving them to marvel at the untimely ending of a career which was to have lasted a thousand years, and reducing them to the necessity of offering to the world what explanation they could of so dire a catastrophe. Her chief assistants—those who composed her immediate household, and who had enjoyed the greatest degree of intimacy with her—were equal to the emergency.

They declared that she had informed them of her intention to depart for a season, in obedience to a divine command, and had instructed them to keep the flock together until her return, which they should expect at the expiration of seven years. With the greatest secrecy her body was conveyed to the cellar and buried there, leaving the way easy for the circulation of a report which was immediately started, to the effect that the Universal Friend had been taken away by supernatural agencies. By this means the society was not only enabled to present a bold front to the

unfeeling scoffers who tauntingly asked, "Where is your immortal mistress?" but, by a constant repetition of the story, they even brought themselves to believe it; and many there were who confidently expected to see Jemima reappear at the appointed time.

Disintegration in some degree, however, followed naturally upon the death of the leader, and when she failed to materialize after seven years, according to agreement, the society rapidly fell apart, so that when her biographer wrote (1843), there were to be found only a very few old men and women who had once followed the Universal Friend. We have said that Jemima gained a reputation for beauty in her younger days, and she is described as retaining, throughout the greater part of her life, an uncommon share of good looks. Her fine figure, her graceful carriage, good features, and flashing dark eyes find frequent mention in the records at hand, and are also matter of tradition. She affected a masculine style of dress; wore skirts, to be sure, but clothed the upper part of her body in coat and waistcoat, and always went abroad wearing a high beaver hat, from beneath which her abundant black hair hung in carefully arranged curls upon her shoulders. She demanded for her own use the finest fabrics, and was always particular regarding her personal appearance; indeed, she was fastidious about everything, enjoying nothing so much as a display of wealth and magnificence, notwithstanding she instilled principles of an opposite character into her followers. We have seen that she was so fond of gold as to go the length of robbing the State Treasurer; and it is abundantly recorded that in less direct, but no less certain, ways she relieved many well-to-do persons of the major portion of their wealth.

In the earlier part of her public career, finding it necessary to work miracles in order to gain converts, she did not hesitate to perpetrate the most glaring frauds upon her deluded audiences. Her miracle of restoring the dead to life, attempted but once, was publicly exposed by an unbeliever present, who loudly proclaimed his intention of running the corpse through with a sword in order to ascertain whether life was really extinct; whereupon the deceased scrambled out of his coffin and fled precipitately, to the extreme discomfiture of his miracle-working mistress. In healing the sick she had better success, due, doubtless, to the care with which she selected her cases and the caution which led her to interpose only after convalescence had begun. Jemima herself would certainly have preferred to let miracles alone, especially after the unfortunate affair of the fleeing corpse, but her followers continued

to clamor for "a sign from heaven," and, in consequence, she was forced to announce that on a certain day she would walk upon the water and thus effectually convince the most skeptical. When the time arrived she found in waiting at the designated point on the Taunton River a tremendous concourse of people, attracted by the widely-bruited report of her intention. Gravely addressing the crowd, she harangued them for a considerable time in her customary strain, descanting principally upon the value of faith, and concluding by asking if they had faith in her ability to do what she had undertaken. An answering shout assured her that they had, whereupon she dismissed them with her blessing, declaring that since the requisite faith was already implanted in their breasts, they needed not a sign from heaven. Tradition has it that the multitude quietly dispersed, content with this view of the matter, and marveling greatly at the wisdom of their instructress, but this the modern reader is not required to accept entirely without reservation. Regarding her pretensions to a knowledge of men's secret thoughts and actions, it is sufficient to say that she merely managed to find out, through those around her, everything that was to be learned concerning any with whom she was likely to come in contact, after which it was easy enough to exhibit an acquaintance with the visitors' affairs, such as is possessed by any wandering gypsy. With all the above and many similar recorded facts in the history of this interesting woman before us, we are forced to confess that the evidence, viewed from a lay standpoint, is decidedly preponderant upon the side assumed by the author so extensively quoted herein. Nevertheless, I believe that the essential mental state underlying and determining her public acts was one of delusional insanity. The history of the attack; the all-sufficient cause, especially when considered in connection with the patient's disposition and surroundings; the fostering circumstance of her seclusion with only the Bible for a companion; the undoubted manifestations of hysteria in her feigned illness; her impaired bodily nutrition at that time; the trance which marked the climax of the attack, and the consistently insane character of her expressed delusions, together form, to my mind, very clear evidence of the genuineness of Jemima's insanity. In order to arrive at this conclusion, it is by no means necessary to refute the charges of charlatantry brought against her.

Admitting that she deliberately and knowingly humbugged her followers by laying claim to attributes which she well knew she

did not possess; that she practiced vulgar legerdemain as an aid to her deceptions, and that she unstintingly fleeced and defrauded all upon whom she fastened her clutches; admitting all of this, her achievements in that line can still be paralleled, in kind if not in degree, from the published accounts of unquestioned lunatics, even of asylum patients.

THE RAIN-BATH — A NOVEL FORM OF BATH AND NEW METHOD OF BATHING INSANE PATIENTS.

BY WILLIAM PAUL GERHARD, C. E.,

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I gladly comply with the request of Dr. Henry M. Hurd, secretary American Medico-Psychological Association, to prepare for this journal a paper on the "rain-bath" for public institutions.

It would be superfluous on my part to attempt to dwell, by way of introduction, upon the necessity of absolute cleanliness in institutions where large numbers of patients, ill in body or in mind, or both, are cared for.

The requirement of cleanliness is not confined to the buildings and their surroundings, to the air, water, and food supply, and to the maintenance of purity of the soil, but it applies likewise, even to a higher degree, to *bodily cleanliness*. Therefore, no provision is of more importance for institutions than that of proper bathing facilities for the patients. Heretofore this object has been attained by the fitting up of bath-tubs in bath-rooms attached to the wards of a hospital. The method of bathing patients in bath-tubs has not, however, been altogether satisfactory.

Among the more important objections to bath-tubs for institutions I would mention the following:

1. Zinc and copper bath-tubs do not last long, become dented, wear out soon, and lose their bright and cleanly appearance. Enameled iron bath-tubs, unless very carefully used, are apt to have the enamel coating crack or chip off. Galvanized iron tubs have a rough surface and a dirty appearance. White all-porcelain bath-tubs are very heavy, clumsy, and quite expensive, and require large quantities of hot water.

2. The maintenance of bath-tubs and bath fittings is expensive. Tubs also require much space, and much time is lost in filling them, in tempering the water, in bathing the patients, and after each bath additional time is required for emptying, cleansing, and scrubbing the tubs. Consequently they do not accomplish the quick bathing of a large number of patients.

3. Unclean patients taking a bath in a tub are soon immersed in

soiled water, and absolute cleaning of the body would be difficult without emptying and refilling the tub several times for each bather.

4. Bathing patients in tubs has occasionally a debilitating instead of a stimulating effect.

5. Tub baths require very large quantities of bathing water, and a proportionately large amount of hot water.

6. There is a possibility of skin diseases being transmitted from one patient to another. With troublesome patients it may, at times, require struggles on the part of the attendants to place them in a bath-tub, and these struggles may lead to bodily injury.

7. The danger of scalding patients in a bath-tub, and the possibility of suicide of insane by drowning, render the bath-tub undesirable in public institutions.

8. With bath-tubs lazy attendants have an opportunity of bathing several patients in succession in the same water, the patient thus failing to receive clean water for his ablution.

In the modern rain-bath system, tubs are entirely discarded, and simple douche or spray baths take their place, the douche being installed as a distinct and independent form of bath.

The rain-bath, particularly as a form of public bath, had its origin in Germany, one of its chief advocates being Dr. Oscar Lassar. The Berlin Health Exhibition of 1883 gave an opportunity to introduce this form of the rain-bath to the general public, though long before this exhibition rain-baths had been fitted up in prisons and in military barracks in France as well as in Germany.

In the United States the rain-bath was brought to the notice of the engineering profession in descriptions which appeared in the *Engineering Record* (then the *Sanitary Engineer*); it was recommended for military posts in a circular, issued in 1875, by John S. Billings, assistant surgeon, U. S. A., and was again brought to the notice of the medical profession in an article on "Recent Advances in State Medicine," by Dr. George H. Rohé of Baltimore, published July 2, 1887, in the *Journal of the American Medical Association*. It was not, however, until the year 1889 that rain-baths attracted a more general attention. Dr. S. Baruch, a hydropathic physician of New York City, who had an opportunity of visiting and inspecting some of the European baths built on the new principle, published an editorial in the *Philadelphia Medical Times* of August 24, 1889, dealing with the subject.

Leaving out of consideration a small bath-house built at Manistee, Mich., on the rain-bath principle, referred to in Doctor Rohé's

paper, about which the details are meager, the first American rain-bath to attract some attention was installed at Doctor Baruch's suggestion, in December, 1890, at the New York City Juvenile Asylum. Dr. S. Baruch continued to urge the importance of bathing and the need of people's baths, and, partly as a result of his agitation, several rain-baths were installed in 1891 in New York City. Similar baths soon followed in other cities. Hospital superintendents and the members of the New York State Lunacy Commission became much interested in the subject, the latter urging the adoption of the novel method in the State hospitals, in which several experimental spray-baths were fitted up. Mr. Goodwin Brown, of the same commission, became much interested in public baths, and in particular the rain-bath, and to him belongs the credit of having a bill introduced and passed in the assembly at Albany, giving cities and towns authority to build public baths.* I might add that the opinions of medical men who have investigated the rain-bath are highly favorable to the new method of bathing, and many superintendents of hospitals do not hesitate to pronounce it the best method of bathing a large proportion of the patients.

In August, 1894, the first large bath-house fitted up entirely with rain-baths was completed at the Utica State Hospital. Before giving a description of the same, I will briefly discuss the form and the advantages of rain-baths :

A distinctly novel feature of construction in the rain-bath is the inclination at which the overhead douche is placed, the object being to avoid a vertical stream from the douche striking the head of the bather. In the rain-bath the lukewarm water strikes the body from the neck downward, and the head is not wetted, except when the bather purposely places the same under the shower.

In the experimental baths fitted up in some of the New York State hospitals, a hand sprinkler, or spray, attached to a rubber tube is used instead of an overhead fixed shower. For all practical purposes, the inclined douche of the German rain-bath is identical with the hand spray, but the latter requires, in all cases, the services of an attendant for each patient, whereas, many patients in hospitals are able to bathe and perform their ablutions under the overhead inclined douche without assistance. The general use of the hand spray would also appear to me to be objectionable, because it might

* NOTE.—Since the above was written, the Governor of the State of New York has signed a bill making it mandatory upon all cities in the State having 50,000 or more inhabitants, to build and maintain a sufficient number of free baths.

tend to give to the public not acquainted with the management of modern hospitals for the insane, the impression that patients are at times sprayed by the attendants against their wish.

Regarding the many advantages of the rain-bath, I will only enumerate the following :

1. The construction of rain-baths is cheaper than that of bathrooms fitted with bath-tubs. The running expenses for maintenance and repairs are likewise reduced, because the apparatus is simple and not liable to get out of order, and because the douches last longer than the tubs.

2. The rain-bath is always ready for use and requires very little attendance, hence it is economical in management. No time is lost in filling the tubs, tempering the water, and in emptying, cleansing, and scrubbing the tub after each bath.

3. The rain-bath requires much less time in application, and a larger number of patients can be bathed in this system than in bath-tubs.

4. The rain-bath requires less space in the planning of a bath-house than bath-tubs do. More bathers can, accordingly, be accommodated in a given space.

5. *The body of a person using a rain-bath does not come at all in contact with the soiled water*, the water from the douche passing away through the outlet in the floor as fast as delivered. This should be considered the leading advantage of rain-baths.

6. The descending stream of the rain-bath has a mechanical and tonic effect, and its stimulating and invigorating influence is much higher than that of a bath taken in a tub.

7. The rain-bath requires considerably less water than a tub-bath. It is economical in the requirement of hot water, and hence reduces the expense for fuel.

8. In the rain-bath there is less danger of communicating disease; there is no danger at all of patients being scalded or receiving bruises in struggles to place them in the bath-tub, and the patients are always sure to be bathed in clean water, while the opportunity of committing suicide, as in a bath-tub, is entirely removed.

In Europe, rain-baths have been eminently successful, and in this country they are rapidly becoming popular. The advantages are so obvious that I feel confident in predicting an early and successful development of the new form of bath.

Among the many classes of buildings for which rain-baths are eminently adapted, I mention :

1. Public or people's baths in populous districts.
2. Institutions such as general hospitals, hospitals for insane, hospitals for infectious diseases, orphan asylums, prisons, institutions for feeble-minded children, for the deaf and dumb, the blind, etc.
3. Public schools.
4. Factories and manufacturing establishments.
5. Military barracks and armories.
6. Hotels and railroad stations, for railway engineers, firemen, clerks of the mail service, etc.
7. Gymnasiums, college buildings, and club houses.
8. Quarantine establishments, for disinfecting persons by medical sprays (as suggested by Doctor Petruschky, in 1873).
9. On board of steamers and of men-of-war.

After these general remarks I will give an illustrated description of the new bath-house at the Utica State Hospital,* which will serve to answer many inquiries received by the writer concerning rain-baths for institutions.

In August, 1893, Dr. G. Alder Blumer, medical superintendent of the Utica State Hospital, requested the writer, who had been connected with the planning and construction of the majority of rain-baths built in the United States, to visit the hospital, with a view of preparing a report, preliminary plans, and an estimate of cost for fitting up a bath-house with rain-baths for the patients. The building to be used for the purpose was the former bakery of the hospital. The general scheme and the plans submitted by the writer were approved by Doctor Blumer and the hospital managers with only a few modifications. Estimates were obtained and the contracts let in September, 1893. Owing to delay in the completion of the new bakery, the work of changing the old bakery into a bath-house could not be commenced before May, 1894. The work thereafter proceeded rapidly, and on August 31, 1894, the bath-house was completed and put into use. Tests of the bathing apparatus were made, which proved the work to be in every way a success.

The bath-house is centrally located in the rear of the large open court, between the assembly hall and the boiler house and laundry. It can be reached from the male and female wards without the necessity of compelling the patients to go out of doors. a consideration of importance for the bathing in winter-time.

* See also the author's pamphlets: *Some Recent Rain-Baths in New York City*; *The Modern Rain-Bath*; *A Novel Hot-Water Apparatus for Rain or Douche Baths*; *The Rain-Bath at the Utica State Hospital*; on *Bathing and Different Forms of Baths*.

The bath-room proper is 30 feet long and $25\frac{1}{2}$ feet wide, while the adjoining dressing-room is $25\frac{1}{2}$ feet wide and 21 feet long. There are separate entrances, stairs, and vestibules for the men and the women patients. Besides these there is a private entrance at each end of the bath-house.

The building is a two-story structure, the second floor containing a large clothes-assorting room, communicating with the adjoining laundry, and by means of a dumb-waiter with the dressing-room of the bath-house. The other room has been fitted up as a photographer's gallery.

The bath-room proper contains four rows of sprays and douches. In the center of the bath-room a gutter is arranged for the removal of the bath waste-water, the floor on both sides of the gutter being properly pitched to allow the water to run off freely. Four lines of warm-water supply-pipes are carried at a height of about eight feet above the floor, the two inner lines being suspended from the ceiling, and the outer two attached to the side walls. Three of these lines supply ten inclined douches each, while the fourth line supplies a needle bath and nine hand sprays. The room contains eight large windows.

The dressing-room contains, on the side nearest to the bath-room, the four warm-water apparatus, also a water-closet and a urinal. On the extreme wall of the bath-house are placed forty-two open clothes-boxes, arranged in three tiers of fourteen boxes each. *There is also in one corner of the room a clothes dumb-waiter. Benches of hardwood are placed around the free sides of the room, and two long benches stand in the center. The dressing-room contains three windows.*

The space under the bath and dressing rooms was excavated to a depth of five feet. The main floor was constructed of brick arches and I-beams, supported on brick piers. A concrete foundation was placed on top of the brick arches, its upper surface being graded to the central gutter. The floor of the dressing-room is pitched slightly to the two floor outlets shown. The floor of dressing-room, bath-room, and vestibules is finished with American unglazed embossed "Alhambra" tiles.

The walls of the bath-room are wainscoted with white Italian

*The laundry being at the extreme end of the bath-house, it was decided to place the dressing-room immediately adjoining same. But for this fact, it would have been preferable to reverse the location of the bath and the dressing rooms, placing the latter nearest to the wards.

marble to a height of six feet from the floor. The partition dividing the bath-room and the dressing-room is of marble, $1\frac{1}{2}$ inches thick and $7\frac{1}{2}$ feet in height. The water-closet and the urinal are also inclosed by marble partitions, $7\frac{1}{2}$ feet in height. The walls of the dressing-room are wainscoted in ash to a height of six feet. All woodwork in this room, including the benches, lockers, and the flapdoors, is of ash. The ceiling of the bath and dressing rooms is finished with paneled, stamped steel sheets, painted with ivory color special bath enamel paint.

The floor gutter in the bath-room is $9\frac{1}{2}$ inches wide at top, 6 inches wide at bottom, and about 6 inches deep. It is molded in concrete and has three outlets to which the gutter is pitched. Each outlet is covered in the bottom of the gutter with a 5-inch nickel-plated brass-bar strainer, and is connected with a 4-inch waste-pipe, trapped by an iron trap with deep water seal. The gutter proper is covered with sectional perforated gratings of cast brass, laid flush with the tiled floor. The two floor outlets in the dressing-room, which are only used when the floor is flushed with a hose, consist of brass cesspools with shut-off valves trapped by 3-inch iron traps.

The drainage of the bath-house is arranged substantially as follows: From the outside main sewer in the court a 6-inch branch sewer is run into the bath-house. This extra heavy cast-iron drain pipe has a 6-inch main trap, accessible in the space under the bath-room, and a 4-inch fresh-air pipe. From the 6-inch main are branched off the several sub-mains to the floor outlets and the plumbing fixtures. The branch for each gutter outlet is four inches, the sub-main for these is five inches, while another 5-inch sub-main receives a 4-inch branch from the water closet and 3-inch branches from the floor cesspools, the urinal, and the waste outlet from the needle bath. All outlets have traps provided with brass clean-outs. The drains are freely ventilated by means of three 4-inch galvanized wrought-iron ventilating pipes carried above the roof of the bath-house. All cast-iron pipes are put together with lead-caulked joints, and the whole drainage system was tested by filling the pipes with water.

The bath-room is fitted up with thirty overhead nickel-plated brass douches and with nine hand sprays. These latter were placed on the wall where the needle-bath stands, and are intended for patients who need the assistance of attendants in bathing. The first douches were designed to run $7\frac{1}{2}$ gallons per minute (under

25 pounds water pressure). When the German warm-water apparatus arrived it was discovered that douches of another pattern had been shipped and supplied with the apparatus. The German douches have much finer holes, give a very effective and pleasant spray and use only about $2\frac{1}{2}$ gallons of water per minute. The warm-water apparatus had been designed for exactly this consumption at each douche, and so it was concluded to use the German pattern of douche, as being less wasteful of water. The douche stands inclined at such an angle that the water strikes the bather from the neck downward.

The needle bath is a combination needle, shower, liver-spray, and bidet jet bath, intended for special use. It has a large open plated brass floor strainer, two marble partitions six feet high, and in front a white rubber curtain hung on a nickel-plated brass pole. The needle bath is supplied with warm water, of about 100° Fahrenheit, from the nearest warm-water apparatus, but it also has combination valves, with thermometer, enabling the bather to temper the water by the opening of the cold-water valve. Four separate labeled valves control the overhead shower, the side sprays, the liver sprays, and the ascending bidet jet, at the pleasure of the bather.

The water-closet in the dressing-room is a porcelain flushing-rim long hopper, with open oak seat. The hopper is trapped by an iron-enameled trap of special design. It is flushed automatically by seat action from a closed galvanized-iron flushing tank, in which the air is compressed by the pressure of the water supplying the tank. This type of automatic closet does not waste water, and has been found especially adapted to the needs of hospitals for the insane. The water closet is set entirely free on a marble countersunk platform, and the sides of the closet are likewise of marble. Latticed flap-doors of ash, with double-action spring hinges, are fastened to the marble stiles.

The urinal stall is of marble, and has a countersunk marble floor slab, without outlet. The urinal is a porcelain bowl, with large outlet, unobstructed by a strainer, and flushed automatically from a flush tank, operating somewhat on the principle of the Rogers Field annular siphon. The intervals between flushes can be regulated as desired.

In the dressing-room two $\frac{3}{4}$ -inch plated sillcocks are provided for hose connection, to enable the attendants to wash the floor of the room, the waste water passing out through the two brass floor

cesspools. Ordinarily the cover of these is kept closed. Two 3-inch galvanized-iron fire stand-pipes are provided with outlets for fire valves on second floor, in the staircase, and in the clothes-assorting room. The fire valves are $2\frac{1}{2}$ -inches in diameter, and have fifty feet of unlined linen hose attached, supported in swinging hose-racks.

The dumb-waiter in the dressing-room is intended for sending up to the assorting room the soiled underclothing of patients when these undress for bathing. The lockers are intended to hold the patients' clothing while they are bathing. They are called "lockers," although doors with locks are purposely omitted.

The dressing-room is provided with sufficient benches, made of ash, to accommodate forty patients, some being stationary and placed along the walls. There are also one long single and one short double portable benches placed in the center of the dressing-room. Cork mats will probably be laid on the floor of the dressing-room to keep the floor dry and the bathers' feet warm. In the bath-room a long bench is placed in the center of the room to enable the bathers to sit down while washing their feet.

All piping in the bath-room and at the warm-water apparatus is of tinned and annealed brass pipe. The sizes of supply pipes are as follows: The water main to the bath-house is a 4-inch pipe of galvanized wrought-iron, with 3-inch branches to each fire stand-pipe, and with 2-inch branches to each of the four warm-water apparatus controlled by valves. The sillcocks are supplied by $\frac{3}{4}$ -inch pipes, the flush tanks of w. c. and urinal by $\frac{1}{2}$ -inch pipes. The four warm-water mains of brass are each 2 inches in diameter, with 2-inch and $\frac{3}{4}$ -inch "T" branches; the piping to each douche or hand spray is a $\frac{1}{2}$ -inch pipe. The warm-water supply to the needle bath is 1 inch. The steam supply to the warm water apparatus is a 2-inch high-pressure main (with sixty pounds steam pressure), having 1-inch branches to each apparatus, controlled by globe valves. The return pipe for condensed steam from each apparatus is $\frac{1}{2}$ inch in diameter.

The bath and dressing rooms are heated from overhead steam pipes to avoid placing radiators where patients would be in danger of scalding themselves. Large steam mains pass through the excavation under the bath-house, and the heat radiating from these pipes is intended to impart warmth to the tiled floor, so as to prevent the bather's feet from becoming chilled. The vestibule, stairway, and connecting corridors leading to the wards are heated so as

to prevent patients from catching cold when returning to the wards after the bath.

Ventilation of the bath-house is accomplished by two large vent flues having registers at the ceiling of the dressing-room and of the bath-room, which flues are extended upward through the roof.

In daytime the bath-house is amply lighted by eleven windows, with panes of glass rendered opaque to secure privacy. The bath-house will also be wired for incandescent electric lamps suspended from the ceiling.

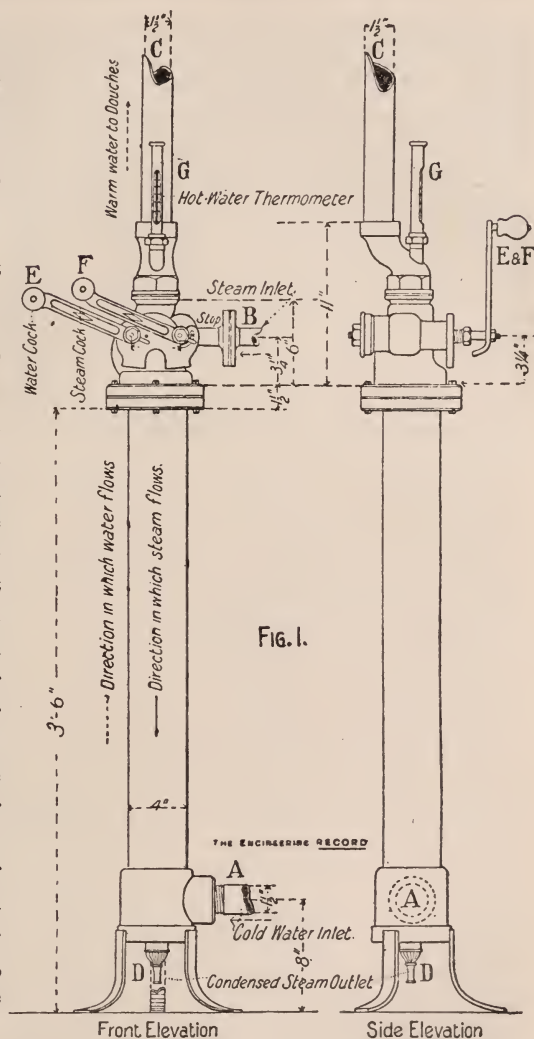
All general requirements of sanitation have been strictly observed in the arrangement and construction of this bath-house. The drainage is arranged with particular care. All outlets into the sewer system are safely trapped, the drains are amply ventilated and flushed by the large quantity of bath water, the water closet and urinal are of the best available type for hospital use, and the whole plumbing system has been made tight and tested.

A question of prime importance in the fitting up of rain-baths is the provision of a large quantity of warm water; indeed the ultimate success of a bath-house will largely depend upon this. For all large bathing establishments special means for warming water are required. Steam is generally available to heat the water, either in closed boiler-iron tanks with steam coils, or by the direct admixture of steam to the water. The latter method is not to be commended, and the ordinary hot-water tank, heated by a steam coil, is unreliable, being difficult to regulate and wasteful in heat. The Tobey hot-water heater is constructed with a view of obviating this difficulty and is, to some extent, successful. Automatic attachments to the ordinary hot-water tank, which regulates the steam supply, are also in use. Both devices are somewhat complicated and expensive.

A novel and ingenious form of hot-water apparatus, called a "Gegenstrom Apparat," has been extensively used in German rain-baths. It is invented and patented by Mr. H. Schaffstaedt of Giessen, Germany. The water is heated in this apparatus by means of high or low pressure, or by exhaust steam. The apparatus derives its name from its special construction, it being so arranged that the cold water and steam travel in opposite directions (*Gegenstrom*: counterstream) without at all mixing together. It heats the water instantaneously, uniformly, and without noise. On account of its simplicity in construction and efficiency in action, the writer, with the approval of Doctor Blumer, selected the Schaffstaedt "Gegen-

strom" apparatus for the rain-bath at the Utica hospital; and four heaters, each designed and calculated to supply warm water of not to exceed 110° Fahr. for ten douches, running at the rate of $2\frac{1}{2}$ gallons per minute under twenty-five pounds pressure, were imported from Germany.*

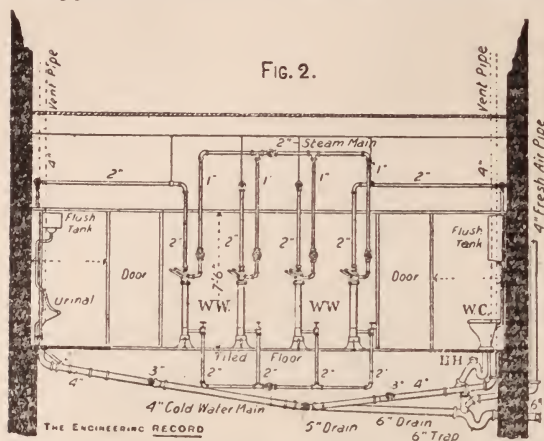
The apparatus at the Utica State Hospital are the first "Schaffstaedt" apparatus put in actual use in the United States. Fig. 1 shows a front and side elevation of the warm-water apparatus. A is the inlet for cold water, B the inlet for steam, and C is the warm-water outlet pipe leading to the douches. D is the outlet pipe or return pipe for condensed steam. E is the cold-water cock and F the steam cock. G is a hot-water thermometer, graded to indicate up to 220° Fahr.



The principal dimensions of the apparatus are figured in the illustration, and in the cross section (Fig. 2) of the dressing-room the complete piping of the warm-water apparatus is shown.

* The Schaffstaedt apparatus is now obtainable from Henry Huber Co., 81 Beekman St., New York, who control the manufacture and sale of the apparatus in the United States.

As a matter of general interest to institutions I would state that the apparatus is manufactured in a number of different sizes and capacities.



For small rain-baths, and wherever it is contemplated—as in people's baths—to allow each bather to regulate the water himself, the smallest size, supplying only one nozzle or douche, is used. In larger establishments,

and wherever it is desired to bathe a number of people together and as quickly as possible, it is better to fit up the larger sizes, suitable for from two to twenty douches. In this case the apparatus must be controlled by a special attendant or bath-master.

Referring again to the illustrations, it will be seen that the water and steam valves are so placed and arranged that it is impossible to turn on the steam without first turning on the water. In all "Gegenstrom" apparatus constructed for bath purposes, the amount of heating surface is so calculated and adjusted that—for a constant pressure and temperature of steam—the temperature of the warm water can not exceed 110° Fabr., when all the douches are kept running, hence there is no danger at all of scalding patients.

The chief advantages of the apparatus are as follows:

1. It accomplishes the instant warming of any quantity of water to any desired temperature. By turning on both the cold water and the steam valves, the water which is admitted cold is discharged as warm water at the douche. Hence the apparatus effects a saving of time.

2. It also saves the first cost of a hot-water reservoir or tank, because such reservoir is not needed at all. The space occupied by the hot-water tank can be appropriated for other uses.

3. It saves fuel, because there is no heat wasted, as is the case with hot-water reservoirs.

4. The warm water generated by this method has neither bad smell nor taste, nor is the water in any way rendered impure.



Plate I.—BATH ROOM.



Plate II.—DRESSING ROOM.

5. It works noiselessly, the water and steam not coming in contact with each other.

6. It is perfectly safe and free from the danger of inflicting scalding.

7. It is capable of perfect regulation, and gives instantly warm water of any desired temperature, up to 110° Fahr.

8. It is very economical in use, doing away with hot-water tanks and the corresponding amount of piping, and a double set of valves or faucets. It is easily fitted up, requiring only four connections, viz., a steam supply and return connection, a cold-water inlet and a warm-water outlet connection.

Wherever steam is available the Gegenstrom apparatus may be considered one of the most reliable, cheapest, and most economical apparatus for heating water of which I have knowledge. It is applicable to public baths, whether the same be fitted up with tubs or douches, or with swimming tanks, and it is furthermore particularly adapted in the case of medical and hot mineral baths, because in this apparatus mineral water may be heated without losing any of its component parts (salts gases). The apparatus is eminently adapted for rain-baths in factories, schools, hospitals, and other institutions. The writer is able to state that the apparatus put up at the Utica State Hospital works just as anticipated, and, so far as known to him, has proved in actual use in every way satisfactory.

In conclusion I am enabled, by the courtesy of Dr. G. Alder Blumer, to present two illustrations, made from photographs taken at the hospital, and showing the apparatus at the Utica Hospital in operation and the patients being bathed. Plate I shows an instantaneous view in the bath-room, all the overhead douches running.* It shows the gutter in the center of the tiled floor, covered by a grating of brass, made in sections. The wooden bench in the center of the bath-room enables the bather to sit down while washing his feet. In the right-hand corner of the picture is shown the needle bath placed in a marble stall. On the wall to the right are shown the hand sprays with rubber tubing, hung on the wall in plated brass forks. The marble partition at the end of the room separates the bath-room from the dressing-room. Through the door at the right a partial view of the dressing-room, with the clothes-lockers in the distance, is obtained. This view gives a

* It was found impossible to take the views with the warm water running, on account of the vapor interfering with the work of the camera. Hence the douches were run with *cold* water only, and this explains why, in the picture, the patients do not stand, as originally intended, directly under the streams from the douches.

very good idea of the arrangement of the overhead piping, and of the position in which the inclined douches are placed. The top pipe, near the ceiling, is the steam-heating main.

Plate II is a view in the dressing-room, taken from the corner where the dumb-waiter is placed, looking toward the marble dividing partition between the bath and dressing rooms, and showing the position of the four warm-water apparatus with their piping. Through the open door are seen some of the inclined douches in the bath-room. The partition to the left in the picture is the end of the urinal stall, and the water closet apartment, with its marble divisions, is shown at the opposite right-hand end of the room. This view gives a particularly good idea of the way in which the warm-water apparatus is fitted up. Four cold-water pipes pass up through the tiled floor to the right of each apparatus, and are controlled by angle valves before entering at the bottom of the warm-water apparatus. The straight upward continuation of the apparatus represents the warm-water pipe, the two end ones turning to the right and left, while the two middle ones go out straight to the bath-room. The lower of the two ceiling pipes is a high-pressure steam main, which has four overhead branches, dropping to each of the four apparatus. The valve controlling the steam is placed at the right of each apparatus. The two sillcocks are for attaching hose for floor-washing purposes.

CHRONIC DELUSIONAL INSANITY OF SYSTEMATIC EVOLUTION.

(LE DÉLIRE CHRONIQUE À ÉVOLUTION SYSTÉMATIQUE.)

CONTINUED FROM APRIL NUMBER.

LECTURE III.

SUMMARY.—The four stages of chronic delusional insanity of systematic evolution. (1.) Incubation—anxiety, suspicions, vague ideas of persecution, illusions, delusions, hallucinations of hearing. (2.) Period of persecution—progressive course of sensory implications, whisperings, isolated words, monologues, dialogues, thought echoes, unilateral hallucinations, verbo-motor hallucinations.

Before proceeding to describe the four periods of chronic progressive insanity, we shall briefly consider the age at which the disease usually sets in, the previous mental condition of the patient, the frequency with which the disease attacks the two sexes, respectively, its relationship to other forms of psychosis affecting the individual, and lastly, the duration of the malady.

The mode of commencement of chronic progressive insanity is in itself sufficient to differentiate it from the insanities of the degenerate, as in the latter delusions may occur at an immature age, thus unmistakably denoting hereditary mental defect. From early youth, sometimes from infancy, suicidal inclinations, melancholic and maniacal mental states, dominant ideas, impulses, even systematized insanities polymorphous in character, may manifest themselves. Chronic delusional insanity, on the contrary, always appears in adult age, ordinarily between the thirty-fifth and forty-fifth year, and is frequently due to prolonged cares and worries. But besides the age of the person affected, another important point in the differential diagnosis of chronic delusional mania is the preceding integrity of the mental condition. The disease most frequently affects people of undoubted intelligence, who have no hereditary nervous defect, and who, previous to the time of invasion, have been free from any intellectual or moral anomaly or disorder. "The mania of persecution," says Lasègue, is not the consequence of any one kind of mental constitution; it manifests itself in individuals of very different temperaments. In the hereditarily degenerate, on the contrary, even though the premature appearance of insanity may be absent, it is always possible to detect certain psychological abnormalities. The victims of chronic progressive insanity may undoubtedly present signs of hereditary degeneration and of psychological abnormality, but similar hereditary nervous defects are

manifest in general paralytics, simple maniacs, and mentally well-balanced, healthy individuals, as well as in the hereditarily degenerate. But although here and there in the ranks of chronic progressive insanity, an isolated case of hereditary mental defect may appear, it does not necessarily follow that such is a *bona fide* case of mental degeneracy. If we examine the clinical records of these cases, we find hard-working mothers of families, engrossed with the cares of their household up to the date of their illness; we meet with others in asylums who possess cultured minds and a keen sense of observation; others again are intelligent, sober men, who, as a rule, have reached their fortieth year without manifesting any mental disorder which was in any way appreciable to their relations. Among such cases we search in vain for those antecedent symptoms so common in the hereditarily degenerate, such as adventures of all kinds, foolish transactions, mental disorders of every description, such as sensory-motor troubles and alternating states of mental exaltation and depression. The history of these degenerate cases reflects their defective moral and intellectual organization and the feebleness of a will which is always at the mercy of unrestrained impulse. Such persons are, on account of their peculiar mental condition, incapable of manifesting a systematically evolved psychosis. "Though the fact of becoming insane," says P. Garnier, "shows a special tendency of the individual in that direction, it must, notwithstanding, be borne in mind that not every intellect can exhibit in insanity the tenacity, the logical coördination, and the deductive methods of the chronic delusional maniac." Although by no means rare, chronic progressive insanity is not one of the most common psychoses. Various statistics give different results, according as to whether persecutory mania was or was not included in the same classification.

Lasègue found that 26 per cent of women showed ideas of persecution, and only 8.5 per cent of men. Legrand du Saulle found it to be 16.6 per cent for both sexes (Statistics of Prefecture of Police, 1867-1871). Foville, at Charenton, 1872, found 19.4 per cent of cases with ideas of persecution. Doctor Plane's statistics, extending over fourteen years, 1872-1885, gives the number of women with delusions of persecution as 12 per cent, and of men 6 per cent. MM. Christian and Ritti state the proportion as being 14.5 per cent for women and 6.7 for men. P. Garnier, in statistics extending over the three years 1886-1888, finds the proportion to be 8.6 for women and 2.1 for men. As will be seen, there is a con-

siderable difference between the figures given by Lasègue in his *Mania of Persecution* and those given by Garnier in his *Chronic Mania*, but this is compensated for by the fact that the insanity of the degenerate bulks more largely in the statistics of P. Garnier. It should be stated that all writers are agreed in recording the much greater frequency of the disease in the female sex.

Chronic progressive insanity has no definite limit of duration. The morbid process never retrocedes, but progresses steadily until the death of the patient. Patients may be met with in whom the psychosis has existed for thirty years, or even longer. It commences generally in an insidious manner, and the first stage, or period of incubation, or period of anxiety, seldom presents in itself any distinctive features. The patient has a general feeling of ill-being and an inexplicable discontent with his surroundings. Gradually he becomes more and more nervous and excitable; the sudden ring of a bell is sufficient to make him start visibly; the visit of a stranger often makes him thoughtful, depressed, and suspicious. In the case of females a feeling of jealousy is often excited by an absurd or unusual incident. The patient imagines that he observes an alteration in the behavior of his relations or of his friends toward him. He sleeps badly, loses his appetite, and shows less aptitude for the performance of his ordinary duties. In this stage of the disease the patient might be looked upon as merely a hypochondriac, were it not that he manifests a distinct tendency to discover, outside of himself, and in extraneous influences, the causes of all his troubles. He will not believe that he is ill, but is always ready to blame others for his vague ailments. Gradually he comes to believe that people look at him askance, that his company is shunned, and that he himself is despised. He is constantly in a state of doubt and hesitation between hosts of conflicting ideas, at first accepted, then rejected, gradually readmitted, and finally ending in the production of insane delusions. At this stage of the affection the symptoms which initiate the malady are, as Lasègue remarks, only of relative value. "There are no great mental disturbances, no marked depression of spirits, only some insignificant, personal, unpleasant emotions. Until now the subjective symptoms deserve no better name than petty worries and annoyances, nor is the insanity accompanied with sensory disturbances." The patient occasionally asks himself why people bear ill will toward him, or what he has done to bring these things upon himself, but his inquiries do not extend farther, neither does

he search for the origin of his persecutions, nor for the names of those who find it their interest to injure and annoy him. The patient remains troubled, anxious, preoccupied, and he begins to be assailed with painful conceptions. He is indifferent to all occurrences outside the narrow limits of his own painful consciousness — morbid consciousness.

He is indifferent to the course of public events, money losses, and family bereavements; he is worn with care, and is impelled to discover in the most insignificant events of life confirmative proofs of his anxieties; his observation becomes limited to lesser facts; he is keen to perceive allusions, quickly perceives *double entendres*, and applies to himself abusive epithets heard casually in the public streets.

The patient now becomes troubled, anxious, and preoccupied with the numerous false conceptions that begin to assail him.

A person forgetting to salute him, an arrested gesture, a neighbor coughing or spitting, a door being opened or shut, a glance, a smile, the romping of children, the call of birds, or any one of a thousand similar trifles, he regards as signs of contempt and sufficient cause to start his sickly imagination upon a course of unreal and false interpretations. Any benevolent or affectionate advances become objectionable, while silence is regarded as offensive. By degrees vagueness and hesitation disappear and are succeeded by certitude and are strengthened by proofs which confirm the patient immovably in his opinions. In this state of mind the patient, always on the alert and listening, may intercept in the course of conversation a phrase which he applies to himself. He may take exception to the use of an insignificant word he manages to confound with some other or coarser expression.

Lasègue very properly observed that a belief in persecution only comes on secondarily. "Here is something more than the mere exaggeration of a natural tendency; the most timid minds are by no means the most predisposed; a new pathological element is introduced into the mental organization and the idea of persecution arises from the necessity there is to explain certain morbid fancies probably common to many patients." At last the day comes when over listening, the constant idea of persecution, mental tension and illusions of hearing, produce an erethismal condition of the cortex. Thought alone is now sufficient to awaken in the sensory center a representative symbol, viz., the auditory verbal image, followed soon by hallucinations of hearing. The limit is at length reached and

the patient enters the second period of the disease, characterized by numerous painful hallucinations, disorders of general sensibility, and persecution mania. It is not our intention to dwell long on the elementary but very important sensory disturbance in chronic progressive insanity, viz., the hallucinations. Anatomical and pathological researches, together with physiological experiment, demonstrate, as is well known, in the gray cortex of the brain the existence of limited territories of nervous matter capable of producing certain definite movements and subjective orders of sensations. The sensory centers in themselves are very interesting. In these centers, mutually united and communicating with the frontal region by means of association fibers, visual, auditory olfactory, gustatory, and tactile images are received and stored. In the theory of the mechanism of the origin of hallucinations as formulated by Tamburini, the theory which best accords with our present knowledge of physiology and clinical medicine, hallucinations are regarded as having their situation in the perceptive cortical centers. The immediate cause is an automatic excitative condition of the center. When there is a sufficient state of erethism of the cortex a nervous discharge takes place, the tactual or visual image arises as if provoked by a peripheral impression and reacts upon the higher psychical centers with all the reality of normal sensation. The sensory disorder which is thus produced is so exact a representation of the ordinary physiological image that the subject is completely convinced and can not entertain the possibility of the phenomenon being pathological. "You want to console me," is the usual reply of such patients to the physician who tries to persuade them of the morbid origin of their sensations. If their friends persist in their efforts at enlightening them, they may become irritated but never convinced.

Sometimes, however, the hallucination is awakened in the perceptive center through the influence of a higher psychical region. Then the course of origin of the phenomenon is reversed and a fixed, unvarying idea reacts powerfully upon the perceptive cortical center, summoning up the image which, when it finally is produced, is only secondary.

At first the hallucination of hearing is not verbal, but consists of imperfect complex sounds; gradually they develop into hummings, rustlings, and the sound of bells; afterward into low, whispering voices. "They speak so low," says the patient, "that I can scarcely hear them." Finally, isolated and distinctly pronounced

words are heard in a loud voice and frequently in a foreign language, if the patient knows more than one language. One of our female patients for a year heard words that she could not understand, and thought that she was becoming really mad. The erethism of the auditory center increases with the progress of the affection. Every auditory sensation of whatever kind is sufficient to produce the verbal hallucination. Rhythmical or continued noises, such as water falling into a vessel, the pulsations of the heart, the creaking of wagon wheels, the ticking of a clock, are supposed by the subject to be the scanning of phrases, thus: "vous a-vez rai-son-co-chon."

The patients declare, however, that the voices occur without any apparent sensory stimulus. They may be heard in the deepest stillness as well as in the midst of deafening noise. They are constantly present both during night and day. They come from all directions—the ground, the walls, the ceiling, the floor, the chimney, and sometimes, even, from very great distances.

They pursue the subject in the most outrageous manner wherever he goes; when he turns to look for them he can see nobody. The sense of sight does not, as a rule, lend itself to the deception practiced by the auditory centers. The subjects hear their enemies, but scarcely ever see them. This explains the use by chronic delusional maniacs of the expression, "my invisible foes," as applied to the voices.

It sometimes happens that these voices can not be distinguished by any special characteristic from the ordinary words heard in conversation by the patient. On the other hand some patients distinguish natural voices from hallucinations. "These voices," one patient explained, "are low and transmitted by the peculiar sound like 'pap pap,' made by smokers when smoking a pipe."

In a few cases the patient observes with astonishment, and relates it freely, that all his thoughts are everywhere reverberated as by an echo, and not infrequently in such cases the voices reply to the thoughts of the patient. "I hear all my thoughts far away," said one patient; "somebody steals them." One man wrote to his brother requesting that he should be locked up in a private hospital, and begging that his brother would choose it for him himself and not let him know where it was. "If I were told where, enemies would also be informed, for they steal my thoughts and would follow me to my new home. If I am kept in ignorance they will be ignorant also. Sometimes every act committed by the patient is audi-

torily reproduced, the physiological consciousness of the act he is performing being sufficient to awaken the corresponding auditory image. For instance, when undressing, the patient may hear a voice saying, "Look, he takes off his shirt."

Frequently those sensory troubles give the wretched sufferers no respite; threats, insults, quizzings, infamous accusations, come one after another without ceasing and without end. One of our patients—a man forty-six years of age, in easy circumstances, and well educated—complained that he was being hypnotized through the sense of hearing in the most diverse ways. He would hear the voices say, "How well he walks! How strong he is! How proud!" Sometimes his actions were announced thus: "Look, he takes out his handkerchief!" He was often completely deprived of sleep, enervated and exasperated on account of the incessant repetition of the same insults, thus: "You are a dirty creature, a false citizen," or "Your brother violated a little girl." "Everyone I loved, my mother, my father, my relatives, were unmercifully vilified in such revolting terms that I can not write them down." Some voices advised him to commit suicide, thus: "Kill yourself! Jump out of the window! Stab yourself!" Finally he was one day persuaded to take poison. It may be easily imagined that with no release from such painful sensory disturbances the mental suffering of the patients must be well-nigh intolerable. "After all," one patient remarked, "there is something both grotesque and monstrous in the constant rain of whispering voices to which I am subjected."

As the disease progresses the cortical centers are thrown out of gear; words, phrases, and monologues are produced outside of the patient's ordinary course of thought, so that when he is thinking of other things and is suddenly accosted by the unfriendly voices, he replies, and a dialogue is then established between the patient, represented by the frontal lobe (higher center), and a second person, represented by the cortical auditory center (lower center). Later on the independence of the cortical centers becomes more marked. They begin to act automatically, and the patient, like an outsider, listens to conversations of which he has no doubt he is the subject. There is an accuser and a defender. One voice abuses him and another encourages him. Finally, as in the old comedies, a third personage intervenes. This is the censor, the person who pronounces judgment upon the different parts of the play. When the abuse is funny and laughable the censor laughs and mocks; if it goes beyond proper limits, or if the censor finds the expression too strong, he takes the

part of the defender, who also actively intervenes. One poor woman, who had been an out patient of ours for fifteen years, constantly led about with her a troupe of this kind, and she often laughingly recounted what they said. One day, when her defender sharply disapproved of a bad word used by her enemies, she was suddenly seized with a fit of coughing and expectoration. She then heard her defender furiously screaming, "You piggish woman, why are you spitting in my face?" and from that moment he ceased to protect her. We shall now study a curious phenomena which is sometimes observed. As a rule, hallucinations affect equally both sides of the same sense. That is to say, the hallucinated individual, like an ordinary man, hears with both ears, sees with both eyes; in a word, perceives with both sides of his brain subjective images external to him.

In certain circumstances, as Calmeil, Moreau, Michea, and many others have noticed, the hallucination is unilateral and affects only one side of the bilateral sensorial apparatus. The patient is influenced only through one eye, one ear, or one side of the body. From what we know of the perceptive centers of the cortical gray matter we can easily understand the phenomena, and we know that an excitation localized in one hemisphere may produce unilateral sensory disorder. One of our patients ingeniously explained the cause of his unilateral hallucinations. His enemy, he thought, held in his hand a concave mirror, by means of which he was enabled to see the reflection of the patient. He then applied a tube to the ear and immediately the patient heard on the corresponding side the host of injurious epithets applied. Auditory hallucinations are constantly present in chronic progressive insanity. They are one of its most important symptomatic characteristics, but they do not exclude the presence of other sensory disorders. Before examining the latter we must add that in some cases excitation of the auditory center is propagated to the motor word center which is physiologically in connection with it. The quasi-automatic mechanism of the last-named center gives origin to these interesting phenomena called psychic hallucinations (Baillarger), or *motrice verbale* (Bibo). Internal voices, many patients say, silently speak in their stomachs and throats; they imagine they hear voices resounding in their ears, but these phenomena are not really sensory, but more or less the result of hallucinations of hearing. The habitual predominance of auditory hallucinations in chronic delusional insanity of systematic development may perhaps be explained by the genesis of the affection.

It is well known that hallucinations are not primary in this disease, but only make their appearance after a long period of incubation and provocation. Besieged with ideas of persecution the patient begins to adapt to his delusions the ordinary auditory sensations which he is constantly receiving (illusions). This transition stage is followed gradually by distinct auditory hallucinations, which require considerable time for their full development. In other words, after the primary intellectual disturbance, there followed an implication of that sense most closely related to intelligence; then the affected sense is made to perceive its own disordered workings just as mentally we listen to our own thoughts.

The psychological types vary according as the prevailing character of the mental disturbance calls for visual auditory or psychomotor representations. The appearance in some cases of chronic delusional progressive insanity of verbo-motor and visual hallucinations must be due to the preponderating influence of the mental affection toward the production of these representations.

Disorders of general sensation are very common. According to M. Falret they only appear in the third stage of the disease, while hallucinations of hearing begin in the second stage, but this is not our experience. On the contrary these general sensations may appear concomitantly with the hallucinations of hearing, may precede the latter, and even give rise to the ideas of persecution. Such cases complain of insects creeping between the skin and muscles, of prickly and burning cutaneous sensations, of being filled with gas, of a general feeling of numbness, and of being magnetized by their enemies. Sometimes they have such notions as that their entrails are being devoured, or that their blood is being sucked by vampires. One man complained that he was being bled from a distance; another that he was deprived of his electricity, or of his "vital energy." Another man would not occupy his wife's bed, which he declared was full of powerful electric currents; others again are pricked with fine jets of vitriol or of magnetism. One man stated that his throat was often "magnetically seized to the verge of strangling him." Others are lethargic, owing to "powders" which have been secretly administered. One woman complained that the feathers in her bed moved and vibrated as if they were alive.

In some patients these affections of general sensation assume an unusually severe form and are accompanied by neuralgias, visceral pains, and permanent sexual hallucinations and delusions.

Such cases correspond to Schüle, "cerebro-spinal forms" — they feel their "blood being expired and inspired." Another man asserted that a cat rubbed against him and tickled him with her fur. A female patient states that she feels "flesh adapted to hers, but not incorporated with hers; the flesh is brought from such a distance that by the time it is applied to her it is tepid," and no sooner has it been applied than it is again withdrawn.

Genital hallucinations form a most important feature of chronic progressive mania, especially in women; they also occur in men. In some female victims of this malady, owing to their persistency and intensity, ordinary auditory hallucinations are thrown into the background. Such patients complain that they are the victims of obscenity, even when in bed beside their husbands. To evade their enemies and avoid such pollution they devise many plans; some swathe their bodies in cloths, others use mechanical means to protect themselves from enemies who introduce into their genital passages many different kinds of foreign bodies. Ideas of pregnancy very commonly succeed. One female patient who, during the period of persecution, had presented marked sensory disorders, chiefly associated with the genital organs, affirmed on attaining the ambitious period that she was pregnant and would soon give birth to a prince.

Hallucinations of smell are by no means rare. The patients perceive the odors of urine, excrement, sulphur, mephitic gas, phenol, etc.

Frequently also there are disorders of the sense of taste. The subjects mention variously metallic poisons in relishes, arsenical poisoning, narcotics in their drinks, etc. It is questionable whether these are really hallucinations or illusions due to defective action of the digestive apparatus. But whatever is the nature of the false interpretation the patient, through fear of poisoning, may refuse any aliment that is offered to him. Hallucinations of sight, apart from co-existing alcoholic intoxication, are less frequent, but not absolutely rare. Their independent existence in this disease is denied by Lasègue, Le Grand du Saulle, and Falret. As a rule erethism, extending from the auditory center to the other sensory regions, leaves out the visual center, notwithstanding the sensitiveness of that center to toxic agents. Lasègue justly remarks: "As a rule the patient does not use his sight in a legitimate and reasonable manner, though the majority of such patients would be indignant if they were accused of being imaginary. However, there are cases

(those complicated by alcoholic poisoning, nervous and organic disease being excepted) in which true visual hallucinations appear in the course of chronic progressive insanity. They are undoubtedly the less frequent form of sensory disorder, and they exercise a very slight influence in the genesis of the insanity, but still they exist, and as a rule they result from the presence of a dominant idea.

In the case of a woman secluded for three years and some months in a cell, we observed very distinct visual hallucinations. Her persecutor appeared to her showing sometimes only his eyes, at other times his grinning face.

The patient's consciousness very quickly becomes pervaded by the influence of these morbid sensory disturbances; they furnish the sole material at the disposal of an active and imaginative intelligence for the construction of a systematized insanity. The ideas of persecution are constantly confirmed by false interpretations, for the most insignificant facts are misinterpreted, and such misinterpretations are in turn adapted to the delusional mental state of the subject. The patients claim that they are constantly watched, that the walls of their houses have inspection holes, that their neighbors are spies, and that the very beggars are sent to watch them. Housewives have been known to assert that their enemies preceded them to the shops and prevailed upon the merchants to charge them the highest prices for goods. On account of the connection that exists between the insane interpretation of ordinary facts and the progressive extension and intensity of the sensory hallucinations the ideas of persecution become every day more precise. In this manner does the insanity become more coördinate, and takes a deeper root in the mind of the patient.

LECTURE IV.

SUMMARY.—Disorders of general sensation; genital, olfactory, and gustatory hallucination—the rarity of visual hallucination—the systematization of the insanity—the effect upon the subject; his attempts to resist, attack, and escape from imaginary dangers—the coining of new words—the mental attitude of the patient is characteristic—attempts at concealment of symptoms—alterations in personality.

All insane ideas have, on the whole, a regular process of evolution. At first vague, diffuse, and not particularized, they gradually become circumscribed, limited, and precise. The patient interrogates himself with regard to all the suspicious facts in his surroundings, in order to ascertain who his persecutors are and by what mysterious methods they operate upon him or plot against him. "Why should people bear ill will to me and persecute me?" is a frequent example of the vague and indefinite manner of self-interrogation employed by such patients in the early stages of the affection. There follows a period when the patient is inaccurate in the expression of his insane notions, and uses unprecise and erroneous terms in describing his enemies.

Later on, however, his accusations become more definite and he begins to denounce groups of individuals, associations, societies possessed of imaginary organization and tremendous power, as the authors of his sufferings. He may accuse the police, the Jesuits, Freemasonry, the medical faculty, etc. Thus day by day the insanity becomes more and more systematized.

The unusual experience and secret character of their sufferings dispose such persons to attribute the origin of these experiences to the immediate agency of such great natural forces as electricity, or, in certain mental constitutions, to such occult powers as magic, sorcery, spirits, or devils. Others, again, readily accept such new scientific discoveries as telephones and telegraphs as the agencies through which their sensory disorders are brought about, for the mystery that still surrounds these inventions is readily seized upon to explain the otherwise unaccountable state of their present existence. They also frequently refer their afflictions to the influence of microbes, magnetism, hypnotism, suggestions, alkaloids, "foam of madmen," experiments made by doctors' inoculation, lymph injections, etc.

The motives attributed to their persecutors are as various and numerous as the agencies through which they are supposed to oper-

ate. Some declare that they are tormented by anarchists, for political reasons; a woman stated her opinion that attempts were being made to throw her into a lethargic state in order that she might be violated; one man imagines the aim of his enemies is to render him insane so as to secure command of his money; a woman thinks her husband's object is to make her insane so as to get rid of her; another woman is convinced that she is persecuted by a jealous neighbor, whose object it is to disturb her household in revenge for having lost a lover; others think that their thoughts are abstracted for the purpose of making books of them.

Finally, from one deduction to another the patient proceeds until he reaches the stage of being absolutely convinced of the truth of his false deductions. He no longer hesitates, everything appears so clearly to his mind; he is approaching the stage of dangerous reaction; he boldly denounces one person whom he holds directly responsible for all his actions. Now ensues a most important change in the patient's mental attitude, both from a medico-legal and clinical point of view; from a state of passive self-defense the patient passes into a state of active hostility toward his imaginary foes.

We are now led to consider the various modes in which the patient afflicted with this malady reacts to his surroundings. For some time the patient can not be considered dangerous. He may sit at his window all day spying his neighbors. In order to escape from his persecutors he may change his studio or office incessantly, or he may change his name. Those who can afford it frequently take long voyages to distant parts (Foville's migrating insane). Those of them who think they are being poisoned purchase their food at various shops at a distance from their homes, and prepare it themselves for use with infinite precautions. They either cook for themselves or frequently change their eating-houses. They draw the water intended for their own use from public fountains at daybreak, and before others have used it, and drink it only after the most minute examination. One of our patients, in order to avoid electrical discharges, wore stays furnished with magnets and silk stockings. Some patients have been known to commit offenses in order to be punished, so that they may invoke the aid of justice. Others, under pretense that they are "wanted" for some crime, surrender themselves to the police.

This period, which is of very short duration in the case of some patients, is succeeded by a period of defensive action. The unfor-

fortunate victims appeal in vain to the police, the various law officers, and conspicuous personages for protection. One patient became a candidate for municipal honors, and in the placards issued by him he endeavored to enlist the public sympathy by means of the following statement: "If you vote for me you will thereby protest against the horrible practice of the use of the electro-magnetic influences upon people at great distances."

Such people carry to public laboratories for analysis their food, drink, spit, urine, and excrement. They barricade their houses and remain often for months at a time without changing their linen. They stop every crevice and chink in their rooms with paper. Finally some of them, tired of the unequal contest, see no refuge but in death. Others, however, and by far the most numerous of this class, become irritated by the unceasing round of outrages, and, driven to the conclusion that their lives are in danger, arm themselves with some lethal weapon and become dangerous to the community. We have known some who sat in the staircases of their houses all night with a lighted lamp and a revolver. One of our female patients was always armed with a stiletto to defend herself against agents who followed her so as to find her in the act of doing something wrong. Such patients, under the influence of an hallucination, frequently strike at an inoffensive passer-by with an umbrella, or stick, or knife, or even shoot with a revolver, to the danger of life. They frequently write threatening letters, provoke, irritate, attempt to shock and surprise their supposed persecutors, and may even kill them. One man, for instance, shot his mistress with a revolver; another summoned three intimate friends to his house one evening and stabbed them with a knife; another man fired five revolver shots at his wife. This extremely active period of dangerous reaction generally occurs late in the progress of the disease, after the patient has become inured to repeated assaults upon his life and honor, but in patients of a certain disposition and quick temper it supervenes often toward the close of the second period. One of the favorite methods of recrimination employed by these people is to legally implicate their enemies. A female brought damaging accusations against a priest; a man attempted to incite the workmen of his supposed persecutors to revolt against their employer.

Those who suffer from more mystical delusions request special masses to exorcise the devilish influences by which they are possessed. The course of the patient toward this stage of the disease

is briefly described by stating that first of all he attempts to escape from his persecutors, secondly he tries to defend himself, and finally being rendered desperate he opens an attack upon his tormentors.

For many years it may be he silently endures his hallucinations and persecutions until at last the type of his insanity becomes recast. New words are invented by the subject to describe the extraordinary nature of his ideas and sensations, for he finds the old terms incapable of expressing all he feels. They use artificial verbs, nouns, and new combinations of old words. One talks about his brain being robbed or his head being taken away. In this period of the disease the patient becomes profoundly altered by the prolonged mental and physical sufferings he is compelled to endure without ceasing, and without appearance of mercy, by the unequal struggle against persecutors who use mysterious forces against him and by the continuous nature of his anxiety. His painful preoccupations gradually produce sleeplessness, want of appetite, anæmia, inanition, followed by various nutritive troubles. The same causes, acting on the moral sensitiveness and producing an over-action of all the sensory and receptive centers, at last end in phenomena of nervous exhaustion and neurasthenic troubles, such as weakness in one or more limbs, neuralgias, sensations of cold and heat, alterations of sight objects becoming enlarged. Sometimes much suffering is caused by a feeling of mental torpor and sudden arrest of (conscious) thought, a feeling of emptiness or vacuum in the head, and an impression that the psychical processes are more or less modified. These functional troubles supply new pabulum to the existing insanity and the patient attributes all his symptoms to the malign influence of his enemies in subtracting his thoughts, stealing his brains, and torturing his body. He imagines that his mind is being artificially confused, and that he is about to lose his reason. In this respect the attitude is characteristic. Surrounded day and night by invisible but always present foes, who outrage, torture, benumb, and awaken him from sleep at their pleasure and discover his most secret thoughts. In vain he tries with many subterfuges to avoid his tormentors. He wraps his head in mufflers or shawls, veils his face, stops his nostrils, or fills his mouth with paper. He may adopt the most unusual positions and postures, such as doubling his body in two, or having one hand applied to the top of his head so as to stop the circulating roller which is constantly passing over it. Some of them perform movements of salutation, or sudden, sharp flexions of the head, as if to avoid odious contact. In their

writings these wretched creatures often express their distress in such sentences as the following: "For the last four years I have not had, day or night, twenty minutes of freedom from persecution, nor many moments for natural sleep. I am now worn out, helpless, and in an incredibly pitiable condition."

The actual world now no longer exists to the patient in the sense of a true environment, but is obscured and colored by an insanity which is constantly being fed with new pabulum by the recurring sensory troubles.

Always suffering and regardless of everything that does not help to systematize his insane conceptions, he manifests an immoderate and unjustifiable selfishness which is altered by no circumstances. He distrusts all his friends and may persistently refuse for many months to give an account of his strange behavior except before a magistrate, or to answer the inquiries of a physician except with such censorious phrases as "You know all about it," as if the whole world were deeply interested in and aware of his condition. The patient may, in other respects, be apparently sane; his memory may be intact and his intelligence unimpaired to the extent of enabling him to write and converse without apparent aberration.

Before passing from the subject of sensory disturbances the painful character of the insanity itself ought to be observed. All the perception and ideas of the patient are colored by the pervading tone of mental depression under which he is laboring. The delusions, illusions, and hallucinations which accompany the disease are only the reflex of a latent mental morbid tendency, and if sometimes an hallucination seems to be the starting point of a particular form of the insanity the original cerebral and moral soil in which it has taken root ought not to be forgotten.

The following case exemplifies the symptomatic aspect and the progressive course of chronic progressive insanity. It is that of a man sixty-five years of age, whose mental derangement has existed for upwards of thirty years. He was admitted to St. Anne's for the first time in 1873, and returned five times, always with the same type of symptoms gradually evolving. Up to his thirtieth year he appeared to be mentally normal. He passed through a long period of incubation and gradually became the subject of hallucinations and delusions of persecution. Finally he passed into the ambitious period, in which stage he now is. With regard to his family history reliable information was obtained, but with the exception of a sister who was subject to "nervous crises," the family and the

patient himself seemed to be remarkably free from any predisposition to insanity. In his infancy and youth this patient was intelligent and industrious, and for many years acted as a bailiff's clerk. He was always on good terms with his employer, and acted for him in the latter's absence. He married at the age of thirty-one. His wife says that he then was of excellent temper, good-humored, and beloved by his friends and acquaintances. Shortly after marriage, however, his changed, sulky, and fault-finding disposition caused much unhappiness in his home before the disease seemed to have advanced very far. In 1857, being then thirty-four years of age, he spoke in his office about the conduct of his friends toward him. He said that they looked at him suspiciously, regarded him as a police spy, and generally mistrusted him. He left his employment after that and remained at home and helped his wife, who supported herself with working a sewing machine. He worked very irregularly, he appeared preoccupied and was anxious, and was constantly moving about the house, going out and in at the door or walking up and down stairs. He soon began to direct his morbid attentions to his neighbors, whom he accused of slandering him, but he remained quite quiescent and partly indifferent to them, although he harbored strong suspicions against a brother-in-law whom he supposed to be too intimate with his wife.

In 1859 he attended a mesmeric seance, and for twenty-four hours thereafter he suffered from violent headache, which led to the development of the idea that people were "sending him tincture of electricity." Very shortly thereafter he began to hear opprobrious epithets applied to himself, such as, "There goes a cuckold," etc. For ten years, from 1860 to 1870, he was tormented with machines of various kinds, but was unable to conjecture who was the cause of his sufferings. He heard voices saying: "If one is not sufficient for the purpose, we shall procure four, five; ay, even a hundred thousand if necessary." His wife stated that in 1869 he always went about with a weapon concealed in his sleeve. One night he stole out of the house, and after being away for some time returned with a pale face and a blood-stained shirt, and said: "That villain will never more call me a cuckold. I have split his dirty skull in two." In 1870 he retired to his sister's house, but refused to speak to his brother-in-law, whom the voices indicated to be his wife's lover. He returned to Paris, where he had not a moment's respite from torment. He was compelled to sit up all night in a corner of his room, fearfully observing all around him. He refused

to sleep with his wife or to touch her, for, as he said, "She is pestiferous and is the channel of transmission through which the evil influences of my enemies reach me ; she is charged with electricity and magnetism, which acts upon me and shakes me." He purchased a Pulvermacher belt, so as to protect himself against electric currents ; he insulated his bed with glass casters ; wore silk stockings, and stays fitted with magnets. In 1873 he went to the office of the Commissary of Police and complained that his next door neighbor, a professor of magnetism, acted on him with currents, gave him creakings in his limbs, and prevented him from sleep. He also complained that his chest was made a striking violet color; that rays of electric light were directed against him from some of the windows in his neighborhood. In the staircase of his own house he heard phrases which he thought must have hidden meanings, such as "Speech is silver, silence is golden." "Prudence is the mother of security."

Finally he was arrested by the police and sent to the asylum, from which he was discharged some months later, calmer and more composed, but still insane.

In 1875 he was again arrested, because of developed delusions of persecution with regard to his brother-in-law, who, he declared, attempted to poison him by dissolving the heads of Lucifer matches in wine, which was offered to him as a drink. In 1878 he carried to the Prefecture of Police sealed bottles which contained his own sputum and different kinds of poison, whereupon he was again sent to the asylum. Previous to this time he had for months been in a filthy state, having carefully abstained from washing himself, or from changing his linen. For fear of poison he only drank boiled water.

While in the asylum he was constantly writing notes on scraps of paper, which he retained as documentary evidence for future use. The same torments were experienced by him in 1880; he complained of "Barricaders," "Internationals," "Diggers," "Curriers," etc., who poured on him "electric tincture," "electric filth," "insane froth," "somniferous drugs," "morphia," etc. In 1883, while passing the neighborhood of some dye works, he felt himself pricked all over by a shower of rose vitriol and he was enveloped in a green-colored rocket. Electric photography is also used by his enemies to deceive him, by means of which he is made to see figures of dogs and horses.

He was constantly hearing voices, etc.; "slanders." of every kind.

His insulters conversed with him and told him that they had been the means of killing his father. (His father was killed in attempting to stop a runaway horse.) Until then his father's death had always seemed to him a perfectly natural one. He also learned that one of his children was killed by means of electric art. He frequently listened to the conversations of his insulters on other topics, and heard them abuse the Government and the chief State officials. About ten years ago he heard somebody promise him an indemnity for his sufferings to the extent of 25,000 francs. While some of his tormentors continued to insult him others took his part and affirmed that he would receive a large sum of money as compensation. For the past year or two he has frequently spoken of 75,000 francs. "The 'Internationals' are rich enough to pay all that; they have millions' worth of property concealed everywhere and are quite able to indemnify me." In the wards he maintains great mental reserve. He is often anxious and suffering from hallucinations and general sensory troubles, but he denies their existence.

"I am now cured," he says, "these feelings are merely imaginary, and not as they used to be." "I know everything at last. I am perfectly resigned. I no longer listen to such things. Thirty-two years of suffering out of sixty-five is a long time."

In such cases there exists a good genius and a bad genius, an accuser and a defender, and in a few cases a body of interested spectators interject remarks, applauding, jeering, scoffing, sometimes siding with the accusers, at other times with the defenders. As Schüle says, "Patients are but puppets moved by strings." The singular psychological manifestations caused by dissolution of the individual's personality are often exactly described by patients themselves. "The wretched system of communications with me," said one of them, "has so much crushed and subdued me, and has been carried on with such overpowering force, that, in spite of all the resistance of which I was capable, my brain, my memory, and my ideas are acted upon from a distance, as my persecutor chooses. For four years and a half he has visited my brain so regularly and examined it so minutely that he knows as much about my affairs as I do myself. Now he has become so mixed up with me, so united to my individuality, that where I go, what I do, say, hear, or see, he perfectly knows. It is awfully but terribly true, though anyone reading it would not believe it."

But the personality of the patient is not profoundly altered by auditory hallucinations. As Mr. Ribot says: "Among the constit-

uent elements of that extremely complex compound 'self' the contribution of the senses is not one of the essentials. They are only objective and reveal to us the external world. A much more important rôle is played by the organic sensations and by the general sensibility which from the depth of the organism reach the various centers.

"In the process of dissolution of self these coenesthetic lesions play a prominent part. The appearance within the realm of consciousness of totally new and unusual sensations devoid of any established relations with the constituent elements of the normal self tends toward the formation of a new personality co-existent with the old personality. A female patient suffering from very severe disorder of general and visceral sensibilities simultaneously manifested profound alterations of personality. She affirmed that her skin was changed; that she was deprived of her sense of taste; that by means of morphia injections her flesh and blood were rendered devoid of all sensation; that her limbs were paralyzed and insensibilized; that her body was deformed and shortened and a 'veil of blindness' cast over her; that her brain is racked, her thoughts read against her will; that strange poisons are inoculated upon her and other people's sickly brains introduced into her head; that she is frequently changed into a young man, and that her real personality is never long allowed to remain peaceably with her.

Moreover, there arise secondarily to these multiple disorders of sensibility new and false ideas in the patient's consciousness which are repudiated by the subject as arising within himself and attributed to the malign influence of his persecutors. "My whole nature is changed, my power of recollection and my usual prudence are interfered with. I do not recognize my own children. It is a complete dismemberment of my former self; half of my head has been given to another person."

These psychical conditions, being entirely opposed to the former experience of the subject, give rise in time to a new personality. As the fatal course of the disease progresses, cerebral resistance decreases *pari passu*, being assailed by a more and more enervating insanity. Gradually self-consciousness becomes so deeply affected that at last the patient comes to believe in a double personality. One of our patients complained that the Empress Eugenie had forced herself upon her (the patient's) individuality and existed with her. One patient complained of a "poisoned" brain existing in her head, and another of the body of a woman, which sometimes got

hard and swollen, being located within her. The invader, she declared, generally substituted her person for that of the real woman during the conjugal relations. One day the subject of this delusion beat her own stomach with a hammer in order to destroy the body of her parasite. A male patient who declared that he was what he called "temporalized," believed that his betrothed had got into his body in such a way as to correspond exactly to his body and organs. Her eyes looked out of his eyes, her mouth was his mouth, her stomach occupied the position of his stomach, etc. Being the occupant of a male ward, he found this additional feminine personality extremely embarrassing. When getting up or going to bed he was as bashful as a young girl and always undressed himself after going to bed. This finishes the description of the first two periods of chronic progressive insanity.

Following a stage during which the patient manifested uneasiness and entertained suspicions, we have shown how the patient constructs his mania of persecution out of materials supplied by sensory disorders. We have been able to ascertain how, in spite of the increasing and extending psychosis, the chief mental faculties remained unimpaired for long periods of time. We shall now consider the state of the mental faculties impaired by the long duration of the insanity. We shall proceed to show that the mind avails itself in a logical manner of the morbid pabulum that has been supplied to it by the diseased consciousness of the individual and how progressively the way is prepared for the inception of ideas of grandeur.

ASYLUM DIETARIES.

BY J. D. MUNSON, M. D.,
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In the business management of a public hospital for the insane one of the principal objects to be obtained is to keep the cost of maintenance at the lowest price compatible with the health and welfare of the hospital population. The outlay for food materials forms a good percentage of the current expenses, and it is of supreme importance for the cure and comfort of patients that foods, in quality and in mode of cooking, be of high order, hence the necessity for systemization of everything pertaining to the food supplied to the hospital.

The following remarks have been prompted simply by a desire to make known our experience in establishing a more scientific basis on which to furnish foods to our people, and no especial attempt has been made to compare the dietaries of asylums. It is true, however, but few dietary studies have been made in this country, and, apart from Miss S. E. Wentworth's efforts at Kankakee, none, so far as we know, have been attempted in connection with hospitals for the insane.

It is well known that man in health, and with moderate labor, requires to repair body waste, from 118 grammes protein, 50 grammes fat, 500 grammes carbohydrates (Voit), to protein, 135 grammes; fat, 135 grammes, and carbohydrates, 450 grammes (Atwater). At the Kankakee Asylum the average amount of food-stuffs consumed per person per day, for a period of three months, was, protein, 111 grammes; fat, 108 grammes, and carbohydrates, 429 grammes, and at the Northern Michigan Asylum, for a period of three months, protein, 114 grammes; fat, 112 grammes, and carbohydrates, 460 grammes. The amount of these foodstuffs consumed will depend upon sex, age, condition of health, and upon the amount of energy expended by the individual in the performance of daily duties. During very severe labor the amount of these constituents may reach as high as, proteids, 200 grammes, fat, 130 grammes, and carbohydrates, 550 grammes, or a potential energy of over 5,000 calories. The United States Army ration gives a potential energy of 3,851 calories, and that of the United States Navy, 4,998 calories. At the Kankakee Asylum the average

was 3,175 calories per person per day, and at the Northern Michigan Asylum, 3,406. "The potential energy of food is estimated in calories. The calorie is the heat which would raise a kilogram of water one degree centigrade (or one pound of water about four degrees Fahrenheit). A pound of protein, or a pound of carbohydrates, is assumed to yield 1,845, and a pound of fat 4,185, calories. The figures for potential energy are calculated for each food material by multiplying the number of grammes of protein and of carbohydrates in one pound (one pound equals 453.6 grammes) by 1,845, and the number of grammes of fat by 4,185, and taking the sum of these three products as the number of calories of potential energy in a pound of the material." (See Nat. Med. Dict., p. xxxv.) The index of protein and carbohydrates are there given at 4.1, and fat at 9.3, but we preferred the index given at Kankakee for the sake of uniformity. The dietary of the insane must be generous, not less than 110 protein, 110 fat, and 450 grammes of carbohydrates per patient per day. A difficulty in fixing a dietary on the basis of the foodstuffs it contains arises from the fact that the percentage of these elements varies largely in meat and vegetable foods, according to quality, and whether in a fresh or dried state. In meats they differ considerably in different parts of the same animal. Moreover, in the fat of pork, fish, and eggs, etc., a percentage is indigestible, and must be deducted from its value as food. Therefore it is better in estimating the amount of foodstuffs in a given dietary, either animal or vegetable, to compute from a minimum rather than from a maximum average, as this insures to the consumer the full average amount of nutritive material. It would, for example, be faulty to estimate a whole beef on the amount of proteids in round steak (23 per cent), and a ration computed on such percentage would be deficient in protein, provided all portions of the animal were used. This may be corrected by adding to the ration, but it is better to assume a general average, which we have placed at 17 per cent.

A physiological ration consists of such a combination of food material as will insure on an average to a person per day the amount of proteid, fat, and carbohydrates above mentioned. The uses of these different classes of nutrients in the economy are, according to Atwater, "protein form tissue (muscle, tendon, etc., fat) and serves as fuel. Fat forms fatty tissue (not muscle, etc.,) and serves as fuel. Carbohydrates are transformed into fat and serve as fuel. In being themselves burned to yield energy,

the nutrients protect each other from being consumed. The protein and fat of body tissue are used like those of food. An important use of the carbohydrates and fats is to protect protein (muscle, etc.,) from consumption (Storrs Agr. Exper. Station, 1892-93), and "in being consumed in the body as fuel to furnish heat and muscular energy the nutrients appear to replace one another in proportion to their potential energy." (Nat. Med. Diet.)

A ration containing the proper proportions of nutrients can be prepared without meats, but not without more or less animal food, and be healthful, but as Doctor Vaughan points out, "some meat, while not necessary to health, does undoubtedly insure bodily vigor."

We followed, in our first efforts to improve the dietary at the Northern Michigan Asylum, the United States Army ration. This ration was found to be rich in meats, coffee, and bread for any but patients at hard labor, and deficient in fruits, milk, butter, cheese, and in a variety of vegetables. By reducing the amount of meat, bread, and coffee, and adding vegetables, butter, milk, etc., excellent dietaries were provided, the patients maintained in a good state of health, and the cost of food kept within reasonable limits. Later we profited by the ration formulated by Prof. Austin Flint for the New York State Commission in Lunacy, which is as follows :

Meats with bone, including salted meats, fresh and salted fish, and poultry.....	12 oz.
Flour, to be used in making bread and in cooking, may in part be substituted by corn meal and macaroni.	16 oz.
Potatoes.....	8 oz.
Milk	8 oz.
Two eggs.....	4 oz.
Sugar	2 oz.
Butter.....	2 oz.
Cheese.....	2 oz.
Rice, hominy, and oatmeal.....	1½ oz.
Beans or peas (dried).....	1½ oz.
Coffee (green).....	1 oz.
Tea (black)....	½ oz.

Doctor Flint suggests that for men 5 per cent may be added to this ration, and for women 5 per cent may be deducted, and for workers 25 per cent may be added to the ration of meat, flour, and potatoes. The ration in use at the Northern Michigan Asylum does not differ greatly from this, and consists of

Butter.....	1.61 oz.
Cheese.....	.50 oz.

Eggs.....	.80 oz.
Flour used in baking bread, cake, and pastry, including vermicelli, crackers, macaroni, corn meal, and buckwheat.....	.15 oz.
Potatoes .....	.12 oz.
Meats.....	.10 oz.
Milk.....	16.10 oz.
Rice, oatmeal, hominy, and pearly barley	1.20 oz.
Beans and peas (dried).....	.50 oz.
Coffee (roasted).....	.35 oz.
Tea (green).....	.16 oz.
Dried fruits.....	.90 oz.
Fruits, fresh and canned.....	.90 oz.
Vegetables, fresh and canned.....	6. oz.
Sugar, including molasses.....	2.82 oz.
Fat.....	.14 oz.

This ration costs about 14 cents per patient per day in our market. Meats are never excluded from the dietaries and all fruits are used freely during their season. Fresh vegetables are supplied, in part, during the winter months from the green-houses, particularly radishes, lettuce, and rhubarb, all of which contain salts that closely resemble those found in the blood, and for this reason are especially beneficial to patients.

A food ration, like those above given, is simply a concise statement of the requirements of the organism, "hence its application is to average conditions. No single fixed standard can be laid down for all conditions. It must be used in connection with intelligent observation." (E. W. Allen, *Agr. Bulletin*, No. 22.) Experience among the insane teaches that there are wide differences in the amount of foodstuffs consumed, owing to idiosyncrasy, condition of health, or other causes. Some eat chiefly meats (protein), while others are quite opposite in their habits of eating. Hence the very important necessity of affording as wide a variety of foods as possible each day, and of changing the dietary as frequently as possible. Digestive derangements are, without doubt, much obviated in this way. There are many conditions which influence the nutritive value of a food, and Doctor Vaughan says: "In order for this to be high, its constituents must not only be rich in foodstuffs, but they must be digestible. By improving the digestion the appearance, odor, and taste of a food increases its nutritive value. It is also quite essential that the volume of food taken should be large enough to satisfy the appetite, and still not so great as to prove burdensome." (*Healthy Homes and Foods for the Working People*.)

In issuing supplies on a scientific basis, where the strictest economy must be practiced, it is extremely important to have a perfect system of requisitions. Without such system the superintendent, or other officer charged with this duty, is at a loss to know what foods have been paid out from day to day, their cost, or their aggregate nutritive value. As the object aimed at is to adapt the dietary to the needs of the hospital population and at the lowest reasonable cost, and to provide as many food materials as possible, a requisition and a record which show at a glance the foods requested and foods previously issued, their cost, etc., become indispensable. The requisition in use at the Northern Michigan Asylum is a printed list of all foods used. It would doubtless add to the value of this requisition if columns were supplied for the percentage value of protein, fat, and carbohydrates of each food. It is well to have a table showing the nutritive value of each food; but as such a table is soon memorized the need of its being printed in the requisition blanks is scarcely felt in practice. The requisitions, after approval, are sent to the store and each article is charged to the department to which it is issued in a journal. This journal accompanies the unsigned requisition to the superintendent, and it requires but a moment of time to correct the requisitions and to determine the kinds and quantities of food materials for the day. An important advantage arising from this simple plan is the aid which it affords in varying the food supplies. By having in view what has been issued to each department on previous days repetition is avoided, and variety introduced by deducting from one or several articles called for an equivalent in value of other articles, or such food material may be added as may be required. This equalizes the quantity, cost, and nutritive value of the food material to be used during that particular day.

Such is the outline of our system. It may seem involved and burdensome in its details, but it rarely requires more than a few minutes for its arrangement, and affords the satisfaction which always results from an accurate performance of duty.

Table menus, however, can not be prepared from the most scientific ration unless the materials of which it is formed are of the highest quality. Doubtless it is possible, in purchasing food material from the lowest bidder, to secure proper quality; but our experience has been that high quality with low contract price is incompatible. There are a few foods which should have the most careful selection. The first in importance is beef. All beef should be

carefully slaughtered and free from bruises, blood, and filth. We have used all grades of beef, and have always regretted, for the sake of our patients and the interest of true economy, any departure from the best grade.

Butter is a very important food. As a rule, store butter is unfit for use. It is essential to know the conditions under which it has been made and the manner in which it has been kept. "It is liable to infection from uncleanness or disease, as well as from vitiation of a foul atmosphere. Just as milk may be infected when taken from a tuberculous or otherwise diseased cow, so is butter made from such milk." (Dr. Mary Green, *Hotel World*, No. 21.) Butter, besides being a great luxury, is of great value in the treatment of certain debilitated states. It furnishes a large percentage of the fat in the dietaries; hence the urgency of its careful selection. What has been said of butter applies as well to milk. Milk is an indispensable food for all patients. If it is purchased, the condition of the cows producing the same should be a matter of careful inquiry. They should be free from disease and well housed and fed. Directions for the care and transportation of the milk should be enforced. This is important, because milk that has stood in cans a few hours in a bad atmosphere, or if transported a considerable distance exposed to the rays of the sun, is not only unhealthful, but may be poisonous from products of fermentation.

Taking it for granted that the food supplies are of the best quality and that they have been issued so as to contain the several constituents of a physiological dietary, table menus must be so prepared that they may be served in the most appetizing manner to the hospital population. In this the services of a chef are indispensable. The chef prepares the "menus," and by his skill in cookery prepares more tempting and digestible "dishes" than could a person deficient in such skill. Until a comparatively short time ago the chief cook at the Northern Michigan Asylum was not paid more than \$50 or \$60 a month, and we are quite certain that we never had value received for our money, either in the quality of the cooking or in the saving of supplies. Since the employment of a chef, in addition to a large money-saving, the food is prepared in a much more delicate manner, and is much better fitted to the needs of the patients. It is almost universally true that when patients are received they are in a reduced physical condition, and it has been found that the health of such patients rapidly improves, and that without so much prescribed or "extra diet" as was formerly neces-

sary. In my judgment there is nothing that adds so much to the comfort of patients, nothing that tends to relieve irritability and fault-finding, as generous and skillfully prepared food. Our experience with an "accomplished cook" quite agrees with Prof. Austin Flint's at Bellevue Hospital. He says: "An accomplished professional cook, at a liberal salary, was put in charge of the kitchens at Bellevue Hospital. As a result of this, not only did the cook save to the institution the sum of his salary, but the cost of maintenance of the patients per capita was materially reduced." (Rep. St. Com. in Lunacy of N. Y.)

The following table shows the food materials issued, their cost and total value in protein, fat, and carbohydrates for the quarter ending April 30, 1895:

ARTICLE.	Amount in pounds.	Total cost.	Protein.	Fats.	Carbohydrates.
Apples.....	4,982	\$ 107 49	149.46	19.92	747.30
Apples, evaporated.	2,254	176 54	90.16	.00	1,127.00
Barley, pearled.....	46	1 17	5.06	.69	31.74
Butter	10,469	2,113 76	.00	8,898.65	.00
Beans, dried.....	3,033	99 96	697.59	60.66	1,789.47
Buckwheat flour....	402	4 90	28.14	6.03	305.52
Cheese	2,535.75	289 65	735.36	786.08	38.03
Cabbage	111,553	135 92	173.29	3.46	531.31
Crackers.....	4,363	187 56	436.30	392.67	3,010.47
Beef	41,210	2,626 26	6,181.50	7,005.70	.00
Bacon	61	6 19	4.88	42.70	.00
Fish, fresh.....	2,442	122 10	244.20	.73	.00
Fish, cod.....	935	75 31	149.60	.37	.00
Corn meal.....	1,383	18 74	127.23	52.55	978.39
Corn starch.....	222	7 75	1.44	.00	188.70
Cranberries.....	18	28	.18	.12	.12
Currants, dried.....	232	15 33	9.28	.00	116.00
Ham.....	380	35 72	64.60	148.20	.00
Liver	2,208	86 92	441.60	119.23	77.28
Apricots, canned...	37	2 11	1.11	.00	4.44
Beans, canned.....	54	2 30	12.42	1.08	31.86
Blackberries, canned	43	2 25	1.29	.00	5.46
Corn, canned.....	183	4 52	5.49	2.19	40.26
Peaches, canned....	307	15 61	9.21	.00	36.84
Pears, canned.....	124	7 74	3.72	.00	14.88
Peas, canned.....	175	7 48	7.17	.87	20.12
Pineapples, canned..	14	1 12	.07	.04	1.40
Pumpkin, canned...	27	81	.29	.13	2.70
Tomatoes, canned...	903	31 25	9.03	1.80	29.79
Mutton	3,072	168 98	491.52	860.16	.00
Pork, fresh.....	5,938	339 40	890.70	1,009.46	.00
Poultry.....	364	48 13	87.36	18.20	.00
Sausage, pork.....	2,605	179 32	338.65	1,094.10	.00
Sausage, Frankfort.	1,054	67 84	158.10	158.10	.00
Sausage, Bologna...	1,956	90 83	352.44	313.28	.00
Veal.....	539	37 73	80.85	75.46	.00
Beets	4,931	34 25	54.24	4.93	221.89

ARTICLE.	Amount in pounds.	Total cost.	Protein.	Fats.	Carbohy- drates.
Carrots	3,726	\$ 27 40	48.43	7.45	223.56
Eggs.....	5,322	521 02	665.25	638.64	.00
Hominy.....	1,728	34 56	155.52	86.40	1,330.56
Lettuce.....	1,660	166 00	24.90	8.30	61.42
Jelly.....	240	5 16	.72	.96	38.40
Onions.....	2,754	30 90	35.80	5.50	165.24
Lard.....	926	78 70	.00	916.74	.00
Potatoes.....	82,685	679 00	1,478.33	165.37	15,710.15
Macaroni.....	299	25 14	32.89	3.88	209.30
Parsnips.....	4,184	37 05	54.39	8.36	251.04
Molasses.....	2,020	77 67	.00	.00	1,474.60
Bananas	16	1 00	.22	.22	4.76
Oranges.....	72	5 13	.72	.64	5.97
Pickles.....	429	8 40	3.43	.85	10.72
Milk.....	113,943	2,278 86	3,988.00	4,215.89	5,355.32
Raisins.....	125	8 95	6.00	.00	62.50
Radishes.....	513	103 60	5.18	1.03	31.08
Oatmeal	3,656	95 23	475.28	255.92	2,559.20
Rice	2,403	114 26	168.21	.00	1,893.37
Peas, split.....	400	10 99	92.00	8.00	212.00
Salsify.....	131	6 55	1.96	.26	13.10
Sugar, granulated..	15,433	675 78	.00	.00	15,093.47
Sugar, brown.....	2,549	81 10	.00	.00	1,911.75
Turnips.....	8,352	44 75	85.56	13.16	394.92
Prunes.....	3,395	134 49	135.80	.00	1,697.50
Vermicelli.....	135	16 87	14.85	2.02	93.15
Flour.....	87,325	1,157 00	9,605.75	309.87	60,254.25
Tea, coffee, spices, salt, vinegar, etc..		965 49			
Total.....		\$14,543 97	29,122.72	28,727.02	79,445.04

Average daily cost, 14.03 cents.

Following the form used at Kankakee, the food results obtained for the quarter ending April 30, 1895, are as follows:

No. of persons.....	1,165	Pounds protein.	Pounds fat.	Pounds carbohydrates.
No. of days.....	89			
Product.....	103,685	29,122.72	28,727.02	118,413.30
Average daily supply per person ...		.2808	.2770	1.1420
10 per cent deducted for waste... ..		.0281	.0277	.1142
Average amount consumed per per- son per day.....		.2527	.2493	1.0278
		114 gram.	112 gram.	460 gram.

Protein..... .2527 lbs.

Carbohydrates...1.0278 "

1.2805 " × 1845 = 2362.52

Fat..... .2493 " × 4185 = 1043.32

3405.84 calories per per-
son per day.

In conclusion I may say that the percentages of food elements were largely taken from the tables of Wood, Gibson, Atwater, Vaughan, and the Kankakee Asylum. From several years' experience I feel that the amount of foods above given could not be materially reduced without the health of the household suffering. Unquestionably, however, the food materials could be much more varied. The table menus are submitted daily for approval. The dining-rooms are tastefully furnished, and everything in connection with the tables is ordered for the comfort of the patients and to obviate objectionable features from carelessness or untidiness in the service.

MAY 25, 1895.

BRIGHT'S DISEASE AND INSANITY.

BY E. D. BONDURANT, M. D.,

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During the past four years a large volume of work bearing upon the question of the relationship between nephritis and insanity has been done at the Alabama Insane Hospital. This work has consisted in a careful clinical study of the physical diseases as well as of the forms of insanity shown by a number of insane patients, carried out by the aid of physical examinations and some thousands of urinalyses, and supplemented by a post mortem examination of the kidneys in all cases available for autopsy.

In round numbers some seventeen hundred cases of insanity, representing the admissions to this hospital for four years, plus the (chiefly chronic) cases resident at the beginning of this period, have been subjected to at least one careful physical examination and urinalysis; and those cases exhibiting bodily disease of any importance, renal or other, have been followed with approximately the care such cases would receive in a general hospital, with repeated examinations of the urinary secretion. The chemical and microscopical examinations of the urine, although their total number is large, have been made with a care and comprehensiveness far greater than is usually accorded this work in the ordinary clinical testing in general practice and in the average general hospital. The study of the renal lesions shown post mortem has been carried out by the microscope, after suitable preparation of sections, in something more than two hundred cases.

Not to enter into unnecessary detail, a brief recapitulation of our collective results, in so far as they relate to the Bright's disease and insanity question, is:

That albumin, together with renal tube casts, can be detected in the urine of more than half of the cases of chronic insanity treated in this institution, and in the urine of quite 75 per cent of the cases of recent insanity admitted.

That a large proportion (*not all*) of the patients whose renal secretion is thus abnormal exhibit at some time some other evidence of renal disorder.

That a smaller percentage, say 25 per cent, of those whose urine contains tube casts and albumin present such clinical evi-

dences of nephritis as should enable any competent practitioner of medicine to make the diagnosis of nephritic disease or complication *without examination of the urine*.

That 75 per cent of the kidneys examined post mortem show pathological changes.

And finally, the facts obtained seem to justify the opinion that many of the patients (*not all*, be it remembered) in whom insanity and nephritis co-exist, are insane because of the nephritis; *i. e.*, the insanity is one of the mental symptoms of acute or chronic uræmic intoxication.

When some two or three years ago the results of our earlier investigations were published,* the statements made, embodying substantially the views expressed in the preceding paragraphs, were received with incredulity and some adverse criticism. This, however, was not unexpected, and a quite natural expression of the prevalent ignorance of the subject, which, despite the very excellent work of some of my predecessors in this field of investigation, had not received the general attention it merited.

In the published criticisms of my work, the objections urged fall chiefly under two heads: First, it is claimed that disease of the kidneys is not so frequently met with among the insane as our results here would indicate; second, that it plays, even granting it to be of common occurrence, no, or a very unimportant, part in the causation of insanity.

One hospital physician reported that he could discover albumin in *two* only of one hundred cases of insanity, recent admissions, and in some fifty cases showing "œdema, obscure headache, nausea, and including cases of agitated melancholia, acute mania, and some of these sick in bed;" *but four* "having albumin enough to react to all tests."† Another physician says that during two years he made a careful physical examination and examination of the urine in all cases admitted to the insane hospital with which he was then connected, and in all cases resident in hospital at the beginning

* The Frequency of Renal Disease among the Insane.—*Journal of Nervous and Mental Disease*, November, 1892.

Report of forty-four consecutive Autopsies upon Insane Patients with especial reference to the Gross Brain Lesions and the condition of the Kidneys.—Biennial Report of the Alabama Insane Hospital, for 1890-92.

Bright's Disease and Insanity.—*Alienist and Neurologist*, April, 1893.

Bodily Disease as a cause of Insanity.—Read before the Medical Association of Alabama, April, 1893.

† Hospital Bulletin, Rochester, Minn., February, 1893.

of that period, adding: "But in none of the recent cases did I find evidence of renal disease or of organic heart affection."*

There are three possible explanations of the wide difference in results reported by us and by some other clinicians, including the two gentlemen above quoted:

1. We find albumin, casts and other objective evidences of nephritis where they do not exist.

2. The gentlemen above quoted fail to find them where they do exist.

3. The insane population of Alabama, or that part of it which is under treatment at the State asylum, suffer from bodily disease, including kidney diseases, to a far greater extent than do the insane patients seen in more northern latitudes. For in the class of patients referred to by the gentlemen above quoted, we would, in Alabama, find not only urinary abnormalities in more than half the number examined, but evidences of organic heart lesion in somewhere between 5 and 10 per cent. My colleague, Dr. R. A. Wright, found organic heart affections in 11 per cent of 702 white patients of this institution, acute and chronic; and as corroborative evidence, I may mention that at the Colney Hatch Asylum, England, Dr. Cecil F. Beadles† discovered 5.8 per cent of organic heart affection in the male patients admitted during five years, presumably recent cases, most of them.

Time and further investigation on the part of physician alienists will, doubtless, solve the problem. In the present state of our knowledge of the subject, my individual opinion is that the explanation will be found in reason No. 2 above. I think there is good ground for the belief that 10 per cent of the adult population of any community show some evidence of renal disease; *i. e.*, tube casts and albuminuria; that in any ward of any general hospital one-half of the sick patients will exhibit albuminuria, plus renal tube casts; and, as stated above, more than half—three-quarters, in fact—of the cases of acute mental disorder brought to the Alabama Insane Hospital have, in their renal secretion, both albumin and casts.

Leaving now the consideration of the frequency of nephritic disease, a few words upon the more important question of does or does not Bright's disease cause insanity.

*The Association of Visceral Disease with Insanity.—*Northwestern Lancet*, December 1, 1893.

†On the Degenerative Lesions of the Arterial System in the Insane, with Remarks upon the nature of Granular Ependyma.—*Journal of Mental Science*, January, 1895.

Almost all are agreed that in certain rare cases it does. The results of our work warrant the opinion that it stands in more frequent causal relation to mental disturbance than is generally recognized.

To enter upon any extended argument for the purpose of showing that nephritis: its resultant "uræmia" — causes mental alienation, is surely at this time unnecessary. The fact is almost self-evident. There is the same reason for the belief that uræmia causes mental disorder that there is for the belief that alcohol causes the phenomena of alcoholic intoxication. The text books describe, and every one recognizes, the ordinary mental symptoms of uræmia. It may be objected that such "mental symptoms" do not constitute insanity. Those who write definitions attempt to exclude from among the insanities those forms of mental alienation which are transient or which are obviously due to disease, and in practice we all accept this distinction and agree that febrile delirium, mild mental depression, or even delirium tremens are not to be called "insanity"; but it should be borne in mind that the difference is one of degree only. And the mental symptoms of uræmic auto-poisoning are not always transient, and the disease often not obvious, in which event such cases, wherever placed in a system of classification, in every-day life get committed to hospitals for the insane, constituting a certain and not very small proportion of the melancholias, puerperal insanities, delirious manias, post grippal and other post-febrile insanities admitted.

The question of the relationship between insanity and Bright's disease is simply a small though important part of the more general question of whether disease of any kind or degree causes insanity. Repeating what has been elsewhere said: "The development of mental aberration of any kind and degree is dependent upon two factors, united in varying proportion in different cases, viz., inherent brain instability, and unwonted and unfavorable conditions external to the brain. The first of these factors is an inherited quality, and for all practical purposes unchangeable; the latter is supplied by the constantly changing and complex forces operating from without, the most important single agency being physical disease. The brain of ideal balance will exhibit perverted action only under the severest strain, actual destruction of anatomical elements being necessary to the manifestation of serious intellectual disorder. In an organism, however, predisposed by inheritance to a ready overthrow of mental equilibrium, changes in the quality of the blood

supplied to the brain, or a slight lowering of general nutritive tone, will be quite sufficient to initiate serious intellectual disturbance; and in extreme cases of this class—those of the well-recognized ‘insane constitution’—very slight physical disorder, so slight as to be with difficulty detected, will be followed or accompanied by a degree of mental disorder out of all proportion to the gravity of the bodily disease.”

Dr. H. A. Tomlinson of St. Peter, Minn., in a paper* written with the avowed purpose of showing that those who hold that visceral diseases bear any etiological relation to insanity “fail to maintain their theses” and “predicate causation on association,” says:

“The victim of any form of constitutional disease suffers from impaired nutrition, not only to the extent of the lessening of functional activity in the diseased organ, but also in so far as the other organic activities suffer on account of their physiological relationship to the function of the diseased organ. Thus the processes of genetic and destructive metabolism are interfered with, the malnutrition is increased, and auto-intoxication takes place, further interfering with the functional activities of the organism, and this condition will be more marked if the disease interferes with the eliminative functions. Given, then, an unstable nervous organization, it almost necessarily follows that disturbance and finally perversion of function supervenes, and we have an outbreak of insanity.”

This expresses substantially the views entertained by those who claim for certain forms of bodily disease, especially those which “interfere with the eliminative function,” a causative influence in the genesis of not only milder grades of mental alienation, but true insanity.

Recent expressions of opinion on the part of some of those best qualified to sit in judgment upon the merits of the case under discussion would indicate that the importance and frequency of the toxic insanities, resulting from nephritic and other diseases, are gaining recognition. Dr. B. D. Evans of Morris Plains says:† “A little careful thought upon this subject leads me to believe that toxic agencies entering the blood play a much greater part in the causation of mental alienations than has seemed to be the impression of our ablest authorities upon the subject. There can be no

*The Association of Visceral Disease with Insanity.—*Northwestern Lancet*, December 1, 1893.

†Report of New Jersey State Hospital, Morris Plains, 1894.

doubt but that this is a most interesting and sadly unexplored field, demanding our attention; and I predict that, when the light of diligent and persevering investigation has been shed upon it, our list of toxic insanities will be increased four-fold." And again: "Why will not the toxic agencies accumulated in excessive quantities by reason of these derangements (of the liver or the more important emunctories) attack the brain cell and nerve fibre, and thus induce mental disease?"

Dr. J. M. Mosher, in a very excellent article recently published "On the Relations of Physical Disease and Mental Disorder,"* remarks: "That there should be a great divergence of opinion upon the relations of kidney and mental disease follows naturally upon hospital neglect of systematic urinalysis and indifference to mental manifestations on the part of the practitioner. * * That somnolence, stupor, vertigo, headache, spasm, convulsions, coma, and delirium might and do arise from the same causes as mania and melancholia, is not inconsistent with our knowledge of the relations and functions of the brain."

The purpose of this paper is simply to again direct attention to the extremely frequent nephritic complications of insanity, and to record the fact that continued investigations in this hospital seem to, in all important particulars, corroborate the results earlier obtained. I commend the subject to the further consideration of the medical corps of our hospitals for the insane.

* Report of the St. Lawrence State Hospital, 1893.

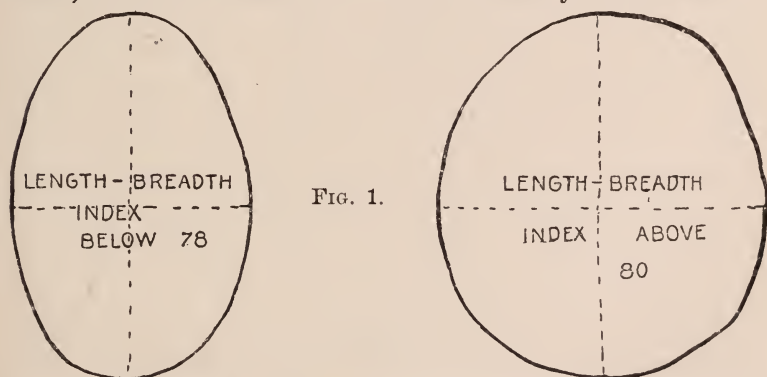
CRANIOMETRY AND CEPHALOMETRY IN RELATION TO IDIOCY AND IMBECILITY.

BY FREDERICK PETERSON, M. D.,

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In a paper read before the New York Neurological Society in 1888 (*New York Medical Record*, June 23, 1888) on "Some of the Principles of Craniometry," I gave in brief form a description of the instruments needed, the methods employed, and the facts to be gained by a study of the conformation of the head and skull in criminals and the insane. As in idiocy, and imbecility in particular, we meet with remarkable deviations from the normal type of head and skull, I feel that more attention should be paid to a study of craniometry in connection with this class of cases than has hitherto been the case. And with this object in view I seek to embody here all the facts that will serve as a guide to a study of the kind under consideration.

A score or more of distinguished anthropologists of the present century have been trying to discover racial distinction in human skulls; but the fact is that there are not so many characteristics of



race in the cranium as in other parts of the body, and accordingly there are still wide differences of opinion as regards a scientific craniological classification. Races have been mingling so many thousands of years that cranial dissimilarities are the rule among them, even in tribes, and to some extent in families. These diversities of form have been designated as dolichocephalic, mesocephalic,

and brachycephalic, words which merely convey an idea of the relation of the length to the breadth of the skull when viewed from above. The antero-posterior is to the biparietal diameter as 100 is to x , is the formula for determining this "cephalic index." All length-breadth indices below 78 are considered dolichocephalic; 78 to 80, mesocephalic; and above 80, brachycephalic. We may assume that the physiological limits of this index are 70 to 90. This is based upon thousands of measurements of skulls by various investigators. Any excess or diminution of these figures must hence be regarded as pathological. (Fig. 1.)

I would merely make passing mention of the fact that, according to latest classifications (Huxley and others), most Europeans and most of the people east of a line drawn from Lapland to Siam are brachycephalic; that negroes, Australians, English, Irish, and Scandinavians are dolichocephalic, and the Hollanders, mesocephalic.

But while one skull may be narrower or broader than another, there is compensation in other diameters. The dolichocephalic has a greater vertical diameter, for instance, than the brachycephalic skull.

Besides these characteristics something must be said regarding the physiological asymmetry of the skull. The fact that the arms

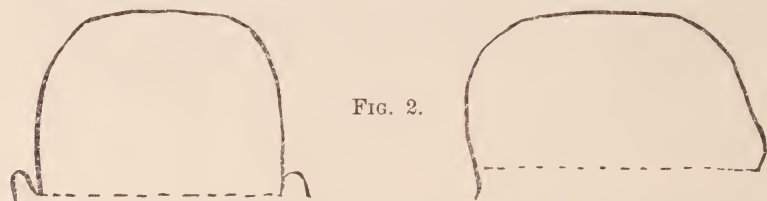


FIG. 2.

and hands are not symmetrical on the two sides of the body, either in size or in function; that the legs and feet are not symmetrical; that the left cerebral hemisphere is larger and more complicated than the right, would naturally lead us to anticipate some slight asymmetry of the two sides of the skull, and the facts of observation support us in the statement that asymmetry is the rule, and perfect symmetry the exception. More than a thousand post-mortem examinations, the examination of several hundred heads, and an inspection of some collections of skulls, such as that of Blumenbach, where I have particularly noted this point, together with the testimony of others, justify me in this assumption.

Asymmetry sometimes reaches extraordinary proportions, often with quite a normal state of brain function, often with marked psy-

chopathic changes. Outside of purely physiological asymmetry we have that depending upon defective development and disease. One of the first of nature's constructive principles in fashioning the skull is the struggle of its contents for volume. Hence, as long ago pointed out by Virchow, premature synostosis of any cranial suture will lead to compensatory deformity. So, too, will arrest of development in any center of ossification, or a unilateral aplasia or hyperplasia of the skull bones, or of the contents of the skull.

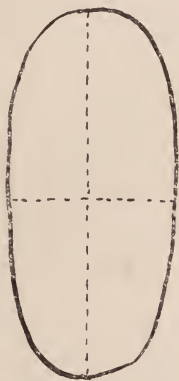


FIG. 3.



Aside from the deformities of the head, which are congenital in character, the diseases which most commonly produce cephalic deformation in early life are rachitis and hydrocephalus; in later life, tumors, exostoses, otitis, etc.; while at all periods of life the shape of the skull is menaced by injuries, from a forceps delivery to a falling brick. The following are some of the commoner designations of well-known cranial deformities:

Chæmocephalus is flat-headedness. In this there is flatness at the top of the head. This is also called *platicephalus*. (Fig. 2.)

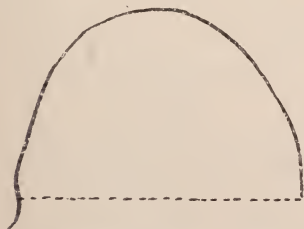
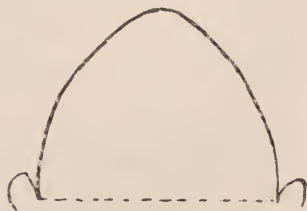


FIG. 4.



Leptocephalus. Early synostosis of the frontal and sphenoid produces leptocephalus or narrow-headedness. (Fig. 3.)

Macrocephalus is a large head usually due to hydrocephalus.

Microcephalus is a small head due either to aplasia of the brain or premature synostosis of the sutures.

Oxycephalus, or steeple-shaped skull, is due to synostosis of the parietal with the occipital and temporal bones, with compensatory development in the region of the bregma. Another name for this is *acrocephalus*. (Fig. 4.)

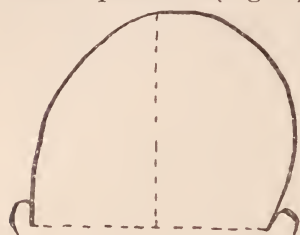


FIG. 5.

Plagiocephalus, or oblique deformity of the head, is due to unilateral synostosis of the frontal with one of the parietal bones. (Fig. 5.)

Scaphocephalus is probably caused either by too early union of the sagittal suture or by the development of both parietal bones from one center. The top of the head is keel-shaped. (Fig. 6.)

Trigonocephalus. Premature union of the frontal suture, resulting in very narrow forehead and great width behind, giving rise to the term trigonocephalus. (Fig. 7.)

It is to be regretted that we have no studies of the psychical histories of tribes accustomed to producing artificial malformation of their heads during development. There are eight or ten species of artificial deformity which have been practiced from time immemo-

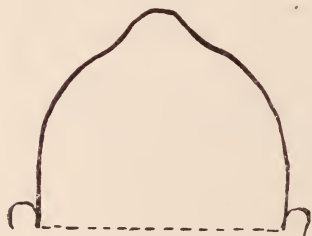


FIG. 6.

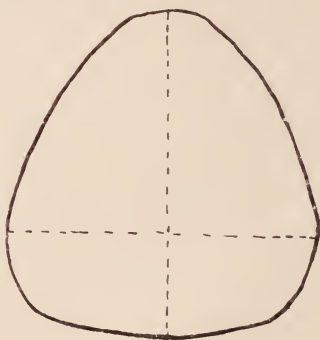


FIG. 7.

rial among the lower races of mankind, and are still in vogue among certain Polynesian and American tribes. The disfiguration is accomplished by means of bandages, boards, or masses of clay fastened upon the infantile skull to produce the prevailing fashionable shape. Many of these skulls are to be seen in the famous collections at Paris, London, and Goettingen.

It may be affirmed that every segment of the skull represents

some particular part of the brain lying beneath it. This may be assumed without proclaiming one's self a proselyte of Gall.

It is certainly true that single convolutions have no very marked influence upon the external configuration of the cranium; but they do, however, strongly impress the inner table of the skull, as will be seen upon examination. The indentations upon the inner table are most distinct on the orbital plate of the frontal, the squamous portion of the temporal, and the upper part of the occipital bone. The orbital surface of the orbital plate of the frontal is perfectly smooth. The outer table of the occipital presents no ridges correlated to the convolutional imprints within, but, on the contrary, has ridges for muscular attachment. The external surface of the squamous portion of the temporal bone is, indeed, modified by the size of the convolutions of the temporo-sphenoidal lobe, but on the head this portion of the skull is obscured by the temporalis. Yet although single convolutions do not impress themselves to such an extent upon the outer surface of the skull as to be recognized, this is not altogether the case with groups of convolutions. Groups of convolutions do modify the shape of the skull, do possess visible representation upon its outer surface.

The great recent advance in cerebral localization paves the way to a newer and more scientific, though more limited, phrenology. Thus the parietal bosses correspond chiefly to the sensory, somewhat to the motor, cortical areas. The dimensions of the forehead have a direct relation to the frontal lobes, the higher intellectual substrata. The left temple has been shown by Benedikt, in one case, to be depressed in congenital aphasia. The parieto-occipital portion of the skull is doubtless modified by the countless sight-memories stored up beneath it. I have, myself, noted in large numbers of cases of infantile spastic hemiplegia an alteration in the shape of the skull on the side opposite to the paralysis. (Some of the Principles of Craniometry, loc. cit., Cranial Measurements in Twenty Cases of Infantile Cerebral Hemiplegia.—*New York Medical Journal*, April 6, 1889.)

The two systems of measurement—the craniometrical and cephalometrical—differ but slightly from each other, the former, of course, being the more exact, since every portion of the naked skull is attainable. Both systems, if perfect, require such measurements to be taken as will serve at any time to reconstruct the skull. Geometry and trigonometry are pressed into use. Certain definite points are selected from the arcs and radii, as shown in some of

the diagrams. It will be seen that the longitudinal, vertical, and horizontal sections of the normal skull all exhibit a certain and definite number of curves. In fact, its whole surface may be considered as composed of an aggregation of small cycloid surfaces, developed and joined together according to fixed biomechanical laws, just as a fruit is evolved on biomechanical principles, with its definite number of seeds and concentric disposition of substance. The object of these notes not being to present a formidable treatise on the triangulation of the skull, but to introduce a few practical ideas, and furnish an incentive for more and better work than has hitherto been done in this country upon this subject, I pass over the long series of craniometrical measurements, and also the thirty-eight cephalometrical formulæ recommended to thorough students by Benedikt, to select those which are absolutely necessary in order to form a just idea of the capacity and symmetry of any head — measurements which ought to be taken in every asylum for idiots or insane upon every patient admitted, and in every prison upon every criminal. Even the asylums of Italy surpass us in this respect. At San Servolo, in Venice, which I visited some years ago, fourteen cephalometrical measurements are taken upon every patient at the time of admission. Figures of this kind become in time of immense value.

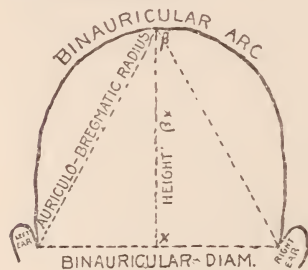


FIG. 8.

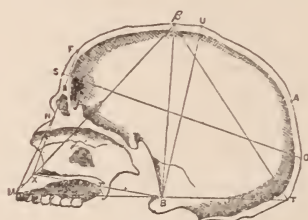


FIG. 9.

I would recommend the eleven following measurements: (Figs. 8 and 9) 1, The circumference; 2, the naso-occipital arc (N to T); 3, the naso-bregmatic arc (N to β); 4, the bregmato-lambdoid arc (β to A); 5, the binauricular arc; 6, the antero-posterior diameter (S to O); 7, the greatest transverse diameter (length-breadth index); 8, the binauricular diameter; 9, the two auriculo-bregmatic radii; 10, the facial length; 11, the empirical greatest height (β to B).

In addition to acquiring these mathematical data, cephaloscopic

drawings are invaluable as exhibiting deformity clearly to the eye. Hence, the horizontal circumference, naso-occipital curve, and binauricular curve should be taken with a strip of lead, or, what is better, with the instrument devised by Luys (on the principle of the latter's *conformateurs*), and the curves projected on paper.

We will now consider each of these eleven points in detail:

1. The circumference of the skull averages 52 centimeters in men, 2 centimeters less in women, with a physiological variation from 48.5 to 57.4. This measurement is taken horizontally around the glabella and the point just above the external occipital protuberance known as the maximum occipital point, from its giving the greatest antero-posterior diameter (Fig. 9, S to O). The scalp and hair superadd about 3 centimeters; hence, in cephalometry about 6 per cent should be deducted to obtain the measure of the skull. (Six per cent should also be deducted in measurements Nos. 2 and 5.)

An effort has been made by Welcker and others to determine the cubic capacity of the cranium through the relations of some of its diameters or its circumference. But it has been found that the cubic contents vary in different skulls, even when the circumferences are equal. It is probable, however, that by the acquisition of long series of cranial diameters and volumes, we will in time arrive at some standard for approximating the quantity of brain in any head. A very rough empirical estimate is that where the circumference of the skull is 50 centimeters its volume will be about 1,350 cubic centimeters.

2. The naso-occipital arc is measured from the root of the nose to the lowest part of the external occipital protuberance (N to T). The average is 32 centimeters in men, one less in women, with a physiological variation between 28 and 38.

3. The naso-bregmatic, or frontal arc, taken from the root of the nose to the bregma (N to β), averages on the skull about 12.5 centimeters in men, 12 in women, with a physiological variation between 10.9 and 14.9.

4. The bregmato-lambdoid, or parietal arc, which is the measurement of the length of the sagittal suture, and hence the extent of the parietal bones, averages on the skull 12.5 centimeters in men, and 6 millimeters less in women, with a physiological variation between 9.1 and 14.4 (β to A). The bregma and lambda are easily found on the head after some education of the fingers.

5. The binauricular arc is measured vertically over the top of the

skull, following Broca's vertical line, between the two auditory meatuses. We select at the meatus either a point on the anterior rim between the middle and posterior roots of the zygomatic process, easily felt on the head just behind the maxillary articulation, or a point on the posterior superior rim corresponding to a small depression, both of which are fixed points, and differ but slightly in elevation. The average is about 32 centimeters on the skull in men, one less in women, with a physiological variation between 28.4 and 35.

6. The greatest antero-posterior diameter is taken from the glabella, or middle of the forehead, to the maximal occipital point (S to O). It averages 17.7 cm. on the skull of men, 5 mm. less in women, with a physiological variation between 16.5 and 19.

7. The greatest transverse diameter is sometimes between the tubera parietalia, sometimes between the upper portions of the temporal bones. It averages 14.6 cm. in men and 14 in women, with a physiological variation between 13 and 16.5. As before mentioned, the length-breadth index is obtained from these two diameters, Nos. 6 and 7.

8. The binauricular diameter is taken between either of the points described, on the rims of the auditory meatuses. It averages 12.4 cm. in men, 5 mm. less in women, and the physiological variation is between 10.9 and 13.9. In measuring the head, the scalp averages 5 mm. in thickness; hence, in the larger diameters (Nos. 6 and 7) 1 cm. must be deducted to get the figures for the skull, while in shorter measurements (such as Nos. 8 and 9) it is sufficient to subtract 7 mm.

9. The auriculo-bregmatic radius of each side is taken from the usual point at the meatus to the bregma. By calculation from these radii and the binauricular diameter, we are enabled to ascertain the distance of the bregma from a point in the median plane, half-way between the two meatuses; this distance averages in the normal skull 11.7 cm., with a physiological variation between 10 and 12.65 (Fig. 8).

10. The facial length is measured from the nasal root to the lowest median point of the inferior maxilla. It averages 12.37, with a physiological variation between 10.5 and 14.4. Including as it does the teeth, infants and the aged are debarred from this measurement. Dolichocephalic heads have, as a rule, narrow, and brachycephalic, broad faces. Something should here be said concerning prognathism, of which there are several forms. The best method of deter-

mining it is to measure the angle made by a line drawn from the nasal root to the junction of the inferior nasal spine and alveolar process (Fig. 9, N X) with a vertical line dropped from the nasal root to Broca's horizontal. It is found that every normal skull exhibits this subnasal prognathism, but there is a wide variation in degree. Extraordinary prognathism, orthognathism, and opisthognathism, meaning extreme projection, straightness, or inclination backward of the subnasal line, are pathological.

11. The empirical greatest height of the head is an approximate measurement of the distance between the basion and vertex of the skull (B to β , or U). A line from the external occipital protuberance to the lowest median point of the superior maxilla, just above the incisors (T to M), passes almost directly through the basion. Hence, in cephalometry, by taking this diameter and the radii from each extremity to the bregma, we have a triangle (M β T) whose height (B β) is easily ascertained. The height averages 13.3 cm. in men, 12.3 in women, and the physiological variation is from 11.5 to 15.

The only instruments necessary for obtaining the data just described are a pair of calipers, the tape line, and a strip of sheet-lead two feet long by half or three-quarters of an inch wide. Benedikt's calipers (manufactured by Wolters in Vienna), which are here exhibited, are to be recommended for their exactness (Fig. 10), and also those that I have had made for my own use. (Fig. 11).

In craniometry proper, still other apparatus is required, viz., one for volumetric estimates, with water in a thin rubber bag, and a cathetometric armamentarium, consisting of a craniofixator, cranicepigraph, telescopic leveling apparatus, and an instrument for projection, by means of which every arc and radius and every portion of the bones and sutures may be exactly studied, measured, and drawn. With this instrument Benedikt makes some one hundred and twenty measurements of every skull. By its use the relations of normal and pathological skulls, and the relations of comparative craniology may be defined with scientific precision.

The arc from the lambda to the external occipital protuberance is worthy of study, particularly in cases of congenital or early acquired blindness, now that we know the cunei to be the principal visual centers; and the arcs of the temporal bones also demand

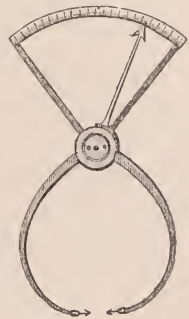


FIG. 10.

investigation as regards their relation to similar conditions of deafness.

Excessive prognathism is found among criminals, in microcephali, and in cases of hemi- and paraplegia spastica infantilis. Skulls known as *crania progenæa* have considerable pathological significance. In these the lower teeth project beyond the upper, and the inferior maxillary angle is obtuse, due, probably, to aplasia of the upper, or hyperplasia of the lower, maxilla.

The demonstration of the empirical greatest height is often quite valuable as an index of degenerative and neuropathic types.

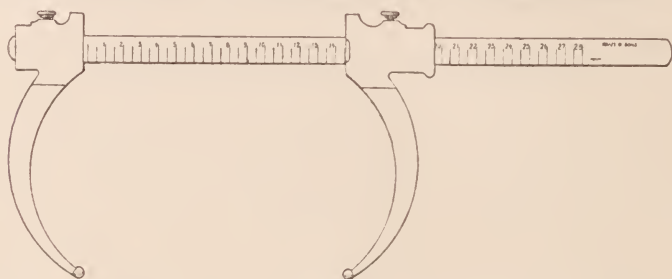


FIG. 11.

The following are some general points which should be considered in the examination of these cases:

A skull below the normal type in volume belongs to an abnormal individual.

Under-typical measurements of the head should always lead us to entertain the suspicion of defective cerebration.

Abnormal smallness of any part of the skull permits the conclusion that the part of the brain in its neighborhood is imperfectly developed.

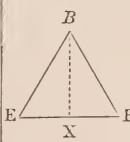
Excessive development of the head has a double signification. It is always pathological, but may mean abnormality of brain or successful compensation. Wormian bones are also doubly significant. They either represent a pathological process or a successful effort of nature in repair.

Hemiplegia spastica infantilis, epilepsy, and intellectual or ethic weakness often exhibit unilateral aplasia of the skull.

The skull is representative of the brain only during the years of its development, and it must be remembered that psychopathic deterioration often has its inception subsequent to the completion of the process, when no impression can be made upon its bony walls.

In order to render the series of normal craniometrical and cephalometrical measurements above described readily accessible, I have condensed the whole in the form of a table, as follows:

TABLE OF CRANIOMETRICAL MEASUREMENTS.

	Average in adult in centimeters.		Physiological variation.	REMARKS.
	Males.	Females.		
1. Circumference	52	50	48.5—57.4	Roughly approximated the volume is to the circumference as 1350 ccm. is to 50 cm.
2. Volume	1500	1300	1201—1751	
3. Naso-occipital arc.....	32	31	28—38	In figure <i>n</i> to <i>l</i> .
4. Naso-bregmatic arc.....	12.5	12	10.9—14.9	<i>n</i> to <i>B</i> .
5. Bregmato-lambdoid arc....	12.5	11.9	9.1—14.4	<i>B</i> to <i>a</i> .
6. Binauricular arc	32	31	28.4—35	
7. Antero-posterior diameter..	17.7	17.2	16.5—19	<i>s</i> to <i>o</i> .
8. Greatest transverse diameter	14.6	14	13—16.5	The formula for the length-breadth index is Length : Breadth :: 100 : <i>x</i> . An index below 78 is dolicocephalic; 78 to 80, mesocephalic; above 80, brachycephalic.
9. Length-breadth index.....	82.2	83.8	76.1—87	
10. Binauricular diameter	12.4	11.9	10.9—13.9	 <p>The height <i>BX</i> of the triangle <i>EBE</i> formed by the auriculo-bregmatic radii and the binauricular diameter, averages 11.17 with a variation from 10 to 12.65</p>
11. Auriculo-bregmatic radii...				
12. Facial length.....	12.37		10.5—14.4	From root of nose, <i>n</i> , to lowest part of chin.
13. Empirical greatest height .	13.3	12.3	11.5—15	The empirical greatest height, <i>hB</i> , is obtained by measuring the sides of the triangle <i>mBt</i> .

These measurements are those of the adult human skull. As the hair and scalp superadd about 3 cm., about 6 per cent should be deducted in the head measurements Nos. 1, 3, and 6 to obtain those of the skull. In taking the diameters Nos. 7 and 8, deduct 1 centimeter (the scalp averaging 5 mm. in thickness), and from the shorter radii, such as Nos. 10 and 11, subtract but 7 mm.

For purposes of comparison of the above skull measurements in normal adults I have collected a number of head measurements of idiots and imbeciles, which are here placed in tabular form. The first tables consist of the measurements in eleven adult men and eight adult women, all imbeciles, with infantile cerebral hemiplegia and, except in two cases, epilepsy:

HEAD MEASUREMENTS IN ELEVEN ADULT MALE PARALYTIC IMBECILES.

	NORMAL HEAD.			MALE IMBECILES.											Men's average.
	Average in adults, in centimeters.		Physiological variation.	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	IX.	X.	XI.	
	Males.	Females.													
Circumference.....	55	53	51.5-60.4	55.3	53.5	54.0	54.0	53.0	51.0	54.0	53.0	54.5	54.5	51.0	53.7
Volume.....	1500	1300	1201-1751	1508	1460	1472	1472	1455	1390	1472	1455	1486	1486	1472	1406
Naso-occipital arc.....	35.0	34.0	31.0-41.0	36.5	35.0	34.0	34.0	35.0	32.0	35.0	34.5	37.5	34.0	33.0	34.5
Naso-bregmatic arc.....	12.5	12.0	10.9-14.9	12.0	13.0	12.0	11.5	12.5	12.5	13.5	13.0	13.0	13.0	13.0	12.6
Bregmato-lambdoid arc.....	12.5	11.0	9.1-14.4	12.0	13.0	13.0	12.5	13.0	10.0	10.5	11.0	12.0	15.0	13.0	12.2
Binauricular arc.....	35.0	34.0	31.4-38.0	35.5	35.0	32.0	33.0	35.0	35.0	33.0	33.5	34.5	36.0	35.0	34.3
Antero-posterior diameter.....	18.7	18.2	17.5-20.0	19.4	18.1	18.9	18.3	18.0	17.3	18.5	18.1	18.9	18.0	17.5	18.2
Greatest transverse diameter.....	15.6	15.5	14.0-17.5	14.4	14.0	14.3	14.0	15.2	13.9	14.5	13.8	14.5	15.5	15.0	14.4
Length-breadth index.....	82.2	83.8	76.1-87.0	74.2	77.3	76.0	76.5	84.4	80.3	78.3	76.2	76.7	86.1	85.7	79.2
Binauricular diameter.....	13.0	12.1	11.6-14.6	11.5	12.3	12.4	11.5	13.0	11.4	12.0	10.8	12.2	12.1	12.8	12.0
Height, <i>Bz</i>	12.2	10.5	10.5-13.1	13.5	12.5	12.0	12.0	12.4	12.8	12.0	12.3	12.05	13.0	13.1	12.5
Facial length.....	12.37	10.5	10.5-14.4	12.0	12.0	13.0	11.6	12.0	12.1	12.5	12.2	12.2	11.4	13.0	12.1
Empirical greatest height.....	13.8	12.8	12.0-15.5	15.2	13.2	13.0	12.3	14.0	12.6	13.5	13.4	14.5	14.4	13.0	13.6

HEAD MEASUREMENTS IN EIGHT ADULT FEMALE PARALYTIC IMBECILES.

	FEMALE IMBECILES.								Women's average.
	XII.	XIII.	XIV.	XV.	XVI.	XVII.	XVIII.	XIX.	
Circumference.....	53.5	48.5	51.5	53.0	52.0	54.0	51.5	54.5	52.3
Volume.....	1310	1128	1261	1293	1274	1323	1261	1335	1281
Naso-occipital arc.....	32.5	30.0	32.0	32.0	31.0	34.0	34.0	31.5	32.1
Naso-bregmatic arc.....	11.5	10.0	11.0	10.5	11.0	12.5	12.0	12.0	11.3
Bregmato-lambdoid arc.....	14.0	12.5	12.0	12.0	12.0	12.0	11.0	12.0	12.1
Binauricular arc.....	30.0	31.0	31.5	35.0	31.5	33.5	33.5	35.0	32.6
Antero-posterior diameter.....	18.6	16.8	18.0	17.5	17.9	18.7	17.9	17.9	17.9
Greatest transverse diameter.....	14.0	13.5	14.0	14.7	14.0	14.4	13.9	15.7	14.2
Length-breadth index.....	75.2	80.3	77.7	84.0	79.8	77.0	77.6	87.7	79.9
Binauricular diameter.....	11.5	11.0	11.3	11.8	12.0	11.5	11.0	11.5	11.4
Height, <i>Bz</i>	11.6	11.2	11.0	12.3	11.5	11.6	12.0	12.2	11.6
Facial length.....	12.0	10.8	9.9	11.6	11.5	10.2	11.1	11.4	11.0
Empirical greatest height.....	12.8	11.5	12.3	12.3	11.3	12.5	12.7	12.7	12.2

With regard to the above measurements there are a number of valuable deductions to be made.

The average circumference is below the average of normal male and female heads. The same applies to the empirical determination of the volume.

The naso-occipital arc is diminished in 6 men and 6 women,

while 1 woman is below the physiological variation. The averages of the 11 men and 8 women are below the normal averages of the two sexes.

The naso-bregmatic arc is below the normal averages in 3 men and 5 women, but the average of the 11 men is 1 mm. above the normal and that of the 8 women 7 mm. below. Two women are so low as to be outside of the physiological variation.

The bregmato-lambdoid arc is under the normal in 5 men. The average of the 11 men is below, and that of the 8 women 4 mm. above the normal sexual averages. It is this arc which Benedikt claims is diminished in cases of ordinary epilepsy, but this probably does not apply to the meta-hemiplegic variety exhibited in seventeen of these cases.

The binauricular arc is diminished in 5 men and 6 women, the total averages of each sex being also below the normal standards. Two of the women are under the extreme of physiological variation.

The antero-posterior diameter is less than the normal averages in 8 men and 6 women, and below the physiological extreme in 1 man and 1 woman. The total averages of the 11 men and 8 women are below the normal sexual standards.

The greatest transverse diameter is below the normal average in all the men and all but one of the women, showing the tendency toward leptcephalus, or narrow-headedness, in this form of hemiplegia pointed out by Benedikt. Under the physiological variation are 4 men and 2 women, or more than 30 per cent.

As regards the relation of length to breadth, the length-breadth, or cephalic index, 8 men and 6 women are below the average. Six men and 4 women are dolichocephalic, 1 man and 2 women mesaticephalic, and 4 men and 3 women brachycephalic. Two men and 1 woman exhibit dolichocephaly outside of the physiological variation, while one woman presents pathological brachycephaly. Taking the averages of the cephalic indices of the nineteen adults, they are all below the average brachycephalic condition and are mesaticephalic.

The binauricular diameter is under the normal standards in all the men and all the women. This being but another transverse diameter, corroborates the result of the measurements of the greatest transverse diameter, viz., the inclination to leptcephalus before mentioned. In 4 men and 6 women, or more than 50 per cent, this tendency is so marked that the binauricular diameters are actually outside of the physiological extremes.

The height bregma- x is diminished in 3 men and pathologically increased in 1. Unfortunately there is no normal female average as yet determined with which to compare the women.

The facial length is below the average in 9 men. We have as yet no statistics as to the normal average in women.

The empirical greatest height is under normal standards in 7 men and 7 women, and the total averages diminished in all 19. Two women present pathological minima.

In many of the cases unusual prognathism is apparent in variable degree, and in some are deformities of the palate and jaws.

Now, if each case be examined singly with reference to normal cephalometrical standards, we find that pathological conditions stand out more prominently than in the aggregate analysis.

Case No. 1, which in many of its measurements surpasses the normal average, and which is the greatest of the twenty cases in circumference and volume, exhibits pathological variation in the cephalic index (74.2), binauricular diameter (11.5), and height ($\beta \times 13.5$).

Case No. 3 presents pathological divergence in the cephalic index (76).

Case No. 4 has a binauricular diameter outside of the physiological limits (11.5).

Case No. 6 exhibits pathological variation in the antero-posterior diameter (17.3), greatest transverse diameter (13.9), and binauricular diameter (11.4).

Case No. 8 shows an abnormal divergence from the physiological limits in the greatest transverse diameter (13.8) and in the binauricular diameter (10.8).

Case No. 10 presents pathological excess in the bregmato-lambdoid arc.

Case No. 12 is pathological in its binauricular arc (30), cephalic index (75.2), and binauricular diameter (11.5).

Case No. 13 exhibits pathological variation from normal standards in circumference (48.5), volume (11.28), naso-occipital arc (30), naso-bregmatic arc (10), binauricular arc (31), antero-posterior diameter (16.8), greatest transverse diameter (13.5), binauricular diameter (11), and empirical greatest height (11.5); in fact, most of the measurements.

Case No. 14 is pathological in its binauricular diameter (11.3) and facial length (9.9).

Case No. 15 presents an abnormal minimum in the naso-bregmatic arc (10.5).

Case No. 16 is pathological in its empirical greatest height (11.3).

Case No. 17 shows morbid deficiency in the binauricular diameter (11.5) and facial length (10.2).

Case No. 18 exhibits pathological variation in the greatest transverse diameter (13.9) and binauricular diameter (11).

Case No. 19 is pathologically excessive in the cephalic index (87.7 and deficient in the binauricular diameter (11.5).

From this it will be seen that all of the cases taken in the aggregate have skulls which fall below the normal average in nearly every measurement, while in fourteen of the nineteen cases the variation is outside of the physiological limits in some of the arcs or diameters.

Besides the mathematical data, three cephaloscopic delineations were taken in each case. The naso-occipital arcs are drawn in such a manner as to give an almost composite view of this arc in each sex, and the slight deviations that exist are perceptible at a glance. Their only value is merely for comparison with normal standards, from which they differ chiefly in length, and hence they are not reproduced here.

The horizontal circumference was taken through the points which give the antero-posterior diameter, viz., around the glabella and the maximum occipital point about an inch above the occipital protuberance. Although this is somewhat below the arcs which would be described around the mid-region of the motor areas, and which would naturally better characterize the pathological change of cranial outline, yet in every one of these drawings a variation is observable between the right and left semicircles, in some slight, and in others very marked, the diminution being always on the side of the lesion, and therefore opposite to the paralyzed half of the body. (For these illustrations see Cranial Measurements, etc., *loc. cit.*) The fact of the existence of epilepsy in cases of hemiplegia is probably significant of an irritative and not a destructive lesion of the cortex; and hence it is natural to infer that the unilateral differences in the brain and skull would be greater in such hemiplegias without epilepsy.

The binauricular arcs were taken, as usual, between the anterior rims of the auditory meatuses, and by their greater contiguity to the motor areas, present rather more distinctly the unilateral differences than do the right and left horizontal semicircles. Each binauricular arc exhibits a diminished quadrant on the side of the

lesion. The pathological variations in the quadrants are often more marked in these cases when the arc is described behind the auditory meatuses from one mastoid process to the other, for thus the chief portions of the Rolandic areas are traversed; but the arcs taken are a sufficient demonstration of the facts stated.

In conclusion I would make the following summary of the facts obtained by a study of these nineteen heads of paralytic imbeciles:

In all of these cases of hemiplegia spastica infantilis the skull is more or less diminished in size on the side opposite the paralysis.

There is a pronounced tendency to diminution in all dimensions and capacity. This is so marked in the transverse diameters as to bring these heads under the class of leptcephalus.

While all of the heads are below the normal averages, more than 73 per cent are actually below the lowest limit of physiological variation in some of their dimensions.

The value of the above tables, then, from an anthropological point of view, lies in their determination of the intimate relationship existing between portions of brain and adjacent cranial areas; from a psychological point of view, in their proving or assisting to prove the interdependence of small-sized heads and mild degrees of feeble-mindedness, congenital or acquired in infancy.

I append here a table of measurements of heads of idiots in thirteen selected cases of marked deformities of various kinds. A careful examination of the figures, and comparison with the normal measurements in the same table, will show the wide variations often observed.

In the matter of circumference it will be seen that there are pathological excesses in ten of the cases, that is, figures outside of the physiological variation (51.5 to 60.4).

As regards the rough approximation of volume only two seem to be outside of the physiological limits (1201—1751 ccm.); but it is clear that, while this method of estimating the volume is fairly correct for heads which are not greatly deformed, it is far too uncertain for such malformed heads as are here given. Take, for instance, the first case of hydrocephalus in the list with a circumference of 63.5, but with an enormously excessive height (19.2). Estimating the volume by the formula for the circumference, $50 : 1350 :: 63.5 : X$, we have 1714 ccm. as a result. Were we, however, to contrast in a similar formula the normal relation of height to volume, we have a far different result. Thus, normal height 12 is to normal volume 1300 as 19.2 is to X ,

and the result is, the pathological case is the enormous volume of 2080, which is, in this case at least, probably much nearer the actual capacity of the hydrocephalic skull than the figure given in the table.

MEASUREMENTS OF HEADS OF IDIOTS WITH STRIKING DEFORMITIES OF THE SKULL.

CASE.	Sex.	Age.	Circumference.	Approximate volume.	Naso-occipital arc.	Naso-bregmatic arc.	Bregmato-lambdoid arc.	Binauricular arc.	Antero-posterior diameter.	Greatest transverse diameter.	Length-breadth index.	Binauricular diameter.	Auriculo-bregmatic radii.	Facial length.	Height <i>Bc</i> .	Empirical greatest height.
Normal male.....	M	adlt	55	1500	35	12.5	12.5	35	18.7	15.6	82.2	13.1	....	12.3	12.2	13.8
Normal female.....	F	adlt	53	1300	34	12	11.9	34	18.2	15	83.8	12.6	....	....	....	12.8
Microcephalus.....	M	41	49.5	1339	32	11	14	26	16.5	13	82.4	12	12	12.8	10.2	11.9
Microcephalus.....	M	13	37	999	20	9	9	21	12	9.5	79.1	9.5	9.7	9	8.4	8.6
Microcephalus hemiplegic.....	M	26	48.5	1309	29	10	13	32	15.4	13.1	85	12.4	12.7	12.1	11.2	12.2
Microcephalus hemiplegic.....	M	6	47	1151	31	9.7	8.6	29	16.3	13.1	80.3	10.1	....	9	11.1	....
Microcephalus paraplegic.....	M	25	46.5	1255	29	10	11	29	15.9	11.2	71	10.5	11.5	10.7	10.2	11.1
Leptocephalus (dolicocephalus).....	M	26	57.5	1552	39	16	15	35	20.5	13.2	64.3	10.3	13.6	11.7	12.7	14.6
Oxycephalus.....	M	19	54	1458	35	15	13	37	18.2	13.8	75.8	11	15	12	14	14.5
Trigonocephalus (brachycephalus).....	M	12	49	1323	31	11	11	32	16	14.5	90.6	12	12.5	10.3	11	11.4
Trigonocephalus (brachycephalus).....	F	25	50.5	1363	32.5	12	13.5	34.5	15.5	15	96.7	11.8	13	10	11.7	12.4
Hydrocephalus.....	F	19	63.5	1714	47	16.5	19	50	19.5	18.5	94.8	12	20	11.2	19.2	17.7
Hydrocephalus (cured).....	F	35	62	1674	42	17	17	43	21.5	17	79	11	16.2	12.5	15.2	15.9
Hydrocephalus.....	M	9	61	1647	41	15.5	16	43	21	17.6	83.8	12.2	15.5	9.2	14.2	14.7
Hydrocephalus.....	M	9	57.5	1552	39	14	16	40.5	20	15.5	77.5	10.8	15.6	8.7	14.7	13.5

The great deficiencies and excesses in the naso-occipital and binauricular arcs are very noteworthy.

The length-breadth indices are interesting, too, for the enormous brachycephalus in three cases, and the extreme dolicocephaly in one.

The excesses in the height *Bx* and the empirical greatest height are striking in several of the cases.

ABSTRACTS AND EXTRACTS.

HYPNOTISM AND CRIME.—Dr. Thomas J. Hudson, *N. Y. Med. Jour.*, May 11th, in an article on this subject, says: "The whole question of hypnotism and crime is in a nutshell, and it only requires a little clear thinking to solve the problem. My proposition was, and still is, that whether a hypnotic subject will obey a criminal suggestion, is 'purely a question of moral character.' The truth of this proposition will become evident when we consider the following propositions:

1. "Persons in a hypnotic condition are constantly amenable to control by suggestion. This proposition no hypnotist will attempt to dispute. It is the fundamental law of hypnotism.
2. "When two contrary suggestions are made to a subject, the stronger suggestion necessarily prevails. This proposition is self-evident.
3. "Other things being equal, an auto-suggestion is as potent as a suggestion by another. This fact is recognized by all hypnotists.
4. "Moral character is a primordial anterior suggestion that neutralizes a criminal suggestion.

"As a corollary of these propositions, * * if the subject's desire to obey the dictates of conscience is stronger than his desire to obey the suggestions of the hypnotist, the auto-suggestion must prevail."

W. Romaine Newbold, Ph. D., *Med. and Surg. Rep.*, May 4th, discusses the dangers of hypnotism. After a physiological and psychological explanation of the phenomena, he points out that the most common and serious danger is that of producing increased and abnormal susceptibility to the hypnotic state. This can be guarded against, as most authorities hold, to some degree, by suggestion, but we can not say that the increased susceptibility may not, after all, come to be more dominant and lasting.

While moral dangers exist, he does not think them to justify serious apprehensions.

Careless or accidental suggestions are a real danger and should be guarded against.

RECIPROCAL MORBID ATTRACTION OF THE INSANE.—J. Luys, *Ann. de Psychiatrie*, May, 1895, calls attention to the tendency already noted by other French writers, and by Bannister and others in this country, to be attracted toward each other and to intermarry. He reports briefly the cases of fourteen families in which insane and neuropathic individuals had intermarried, and the unions had either been sterile (in the majority), or had produced degenerate offspring. Two of the instances were among Israelites, who, rather more than others, present a concentration of this sort of heredity. Nothing is said in the very brief accounts as to any consanguinity which might be suggested by the relation of such cases.

CEREBRAL ŒDEMA.—At the session of the Soc. de Biologie, April 27th (*Le Progrès Méd.* No. 18), M. Levy described cerebral œdema as he found it

under the microscope. It showed itself generally by a reticulated appearance of the tissues, due to the prominence of the neuroglia filaments. It is in relation to the vessels, even when located in the most superficial part of the cortex under the pia; it may be met with in either the white or the gray matter, or in both. It may be limited in extent, and is then found clearly disposed around the lymphatic sheath of the vessel, or may be diffused. It may have a striated appearance due to colored and uncolored bands. It has been observed once in connection with epilepsy, three times each with cardiac disease and kidney disorders, and twice with infections. It is found in the young as well as in the old, and when limited to the pia layers it represents one of the characters of old age.

THE LATERAL BUDS OF THE CORTICAL NEURODENDRA IN INSANITY.—Dr. H. J. Berkley, in a preliminary note (*Johns Hopkins Hosp. Rep.*, April, 1895), reports that in certain cases of chronic alcoholism and dementia, he noticed, with the use of a new staining method—the phospho-molybdate of silver in free nitrate of silver—a diminution of the lateral buds or gemmules of the neurodendra, proceeding in well advanced cases to a total disappearance of the short side processes. This change affected not only the large pyramidal cells, but also the smaller angular and irregular ones, and eventually ended in a lessening in size of the protoplasm of the neurodendra, besides the stripping of the buds from its sides.

This, aside from the evidence of the value of this new stain, which is especially extolled by Doctor Berkley, points to a certain importance in these buds, and is possibly a valuable addition to the pathology of insanity.

CEREBRAL ABSCESS WITH STERILE PUS.—MM. Brouardel and Josue, *Gazette des Hop.*, April 2d, have reported a case of brain abscess in which the contents, as tested microscopically, and by cultures and inoculations, appeared to be absolutely sterile. The case is of interest, as being the first observation of its kind, and as affording an explanation of the encysted cerebral abscesses of long duration that have heretofore been reported. While their careful study revealed no infectious origin in this case, they suggest that the abscess might have had an aural or sinusal origin, which itself disappeared, and later the microbes exhausted themselves in the slow development of the abscess. This last finally caused death by opening into the ventricle. The condition they remark is comparable to certain hepatic abscesses that have been reported containing sterile pus.

ARTIFICIAL ABSCESSSES IN THE TREATMENT OF INSANITY.—G. Albertotti, in a communication to the *Archivio de Psichiatria*, XVI, 1 and 2, 1895, makes a preliminary report on his results of treating mental disease by artificially causing abscesses by the hypodermic injection of turpentine. In three paretics he obtained improvement, quieting agitation in one; modification of grand delusions, and increase of muscular power, and some mental improvement in the second; and in the third, improvement to the extent of rendering the patient, hitherto incapable, able to perform manual labor.

In three cases of stuporous melancholia one cure, one improved, one unim-

proved. One hysterical melancholiac cured; one hysterico-epileptic, in a state of violent agitation, immediately improved after the injection of the essential oil.

In five furious maniacs there was in three notable improvement, none in the other two. One case of excited chronic mania and three agitated melancholiacs are under treatment.

Further reports, as to success, etc., are promised in the future.

CEREBRAL LYMPHANGITIS.—M. Leopold Levi, *Société de Biologie* (Abstr. in *Le Mercredi Medical*, May 15th). We find sometimes in sections of the brain a lesion of the perivascular spaces that is worthy of notice. This lesion was observed by M. Levi in four cases, and seems to indicate a cerebral infection. The four cases were: (1) A generalized infection in a woman of thirty-two, with delirium, enlarged spleen, and liver infection; (2) a case of pneumonia; (3) a case of vegetative endocarditis, with uterine cancer and small foci of cerebral embolic softening; (4) an unnamed infection in the course of Graves' disease, with diarrhoeal crises. The lesion is as follows: In the white substance around the minutest vessels and injected capillaries there occurs, at the expense of the external wall of the sheath, a proliferation of nucleated cells, colored strongly by hæmatoxylin, a proliferation that goes to the extent of forming nodules.

With small powers we see the minuter capillaries congested. The cavity of the sheath is intact. Then there is an edging, a veritable cellular band, markedly contrasting, in hæmatoxylo-eosin preparations, by the violet coloration of its nuclei, with the rose tint of the blood globules. With a little stronger power we see that this border is not merely linear, but that in places it is thickened by the development of minute nodules, made up of five or six elements. In certain places as many as eight or nine cells occur in a single row. It is at the mouths of the small vessels, or at the bifurcation of a vessel, that the lesion is most marked. This lesion deserves to be called a periarteritis, or lymphangitis. The infected brain is therefore marked essentially by a lymphangitis. In order to be distinctive this should be very pronounced, as we find occasionally certain nuclei of the cells of the sheath which are colored, and even forming in places a single line of cells.

It is also necessary that the proliferation be on the sheaths of the vessels, and that, at least at certain points, the lesion be generalized in all the vessels of that particular region.

The lesion is in itself of interest, as it is altogether different from those of the vessels accompanied by proliferation of round cells at the horizon of the periarteritis. It is quite different in aspect from those met with in confirmed paresis or in certain cases of syphilitic vascular arteritis.

Besides the congestion and the lesion described, the sections occasionally show minute localized foci of œdema external to the infected sheath.

CONGENITAL SYPHILIS AND PARESIS.—At the session of the *Acad. de Médecine*, May 14th (rep. in *La France Méd.*), Mr. Fournier read a report on a paper recently submitted by M. Régis (of Bordeaux). It related to two children affected with syphilis and paresis. We can not in these cases

invoke the usually accepted etiology—alcoholism and moral causes—and only have remaining heredity, traumatism, and syphilis. The two first of these could be excluded, and the last, which was very evident, could be invoked.

It is claimed that, in a very large proportion of cases, adult paresis is due to syphilis. It may also appear in the child as the result of hereditary syphilis. Forty-two cases of this kind have been reported, thirty-seven of them very completely; in twenty-nine, syphilis was indubitable; in eight, dubious.

TROPHIC INTESTINAL AFFECTIONS IN THE INSANE.—Dr. I. P. Cowen (*The Lancet*, March 16, 1895) reports cases not infrequent in asylum practice occurring in the Prestwich Asylum, Manchester, characterized by inflammatory and ulcerating conditions of the intestines, attributable to trophic causes. The characteristics are:

1. Any watery alvine flux, very frequently repeated, without passage of blood or excess of mucus, usually without pyrexia or marked general symptoms. This may be fatal, but is often recovered from. Obvious intestinal lesions are rarely observed.

2. A frequent diarrhœa, with vomiting, pains, often tenesmus, and with marked constitutional symptoms. The stools often contain blood, excess of mucus, and slime occasionally. This affection is usually fatal. The necropsy shows an inflammatory affection of the ileum or colon, and often marked ulceration of the mucous membrane. Thirty-two fatal cases have been observed, twenty-two men and ten women. Twenty were cases of general paralysis; the remainder occurred in either stuporous melancholia or in dementia of an incurable type. The writer excludes all cases in which there was the least suspicion of tubercle, typhoid fever, dysentery, Bright's disease, or syphilis. The pathological appearances consisted of patchy congestion of ileum and colon (with enlarged solitary follicles or submucous hemorrhages) subacute enteritis, acute enteritis, and colitis, follicular ulceration of the ileum and of the colon, ulcerative enteritis (ileum), ulcerative colitis, and ulcerative enteritis and colitis. In two cases in which the ulceration was confined to the ileum perforation occurred. The ileum and the lower part of the jejunum and the ascending and transverse colon were the parts usually affected. The ulcers are of various shapes and sizes, and in severe cases tend to run together so as to form an irregular network of ulceration, leaving islets of sodden and congested mucous membrane in their meshes. The bases of the ulcers are but little thickened. The solitary follicles may be swollen, are rarely ulcerated, and not seldom are normal in appearance. Peyer's glands are commonly unaffected or but slightly swollen. The inflammation is often intense and localized, but without local cause. In a case associated with dorsal myelitis the inflammation of the upper part of the rectum was most intense, the inner coats having sloughed out. The organisms present were those usually found in the intestines, but the *bacillus coli communis* was especially common. An inoculation of some of the contents of the gut on nutrient media often yielded an almost pure culture of this organism.

The writer bases the connection of the intestinal lesion with perverted nervous action upon the following reasons: (1) The rarity of such lesions in the

sane; (2) the comparative frequency in the degenerate insane; (3) negative evidence as to causation; (4) their association with other trophic lesions; and (5) the association of such lesions with disease of the central nervous system.

Doctor Cowen concludes with reports of a case of dorsal myelitis with acute mania and cases of general paralysis, in several of which the sudden accession and rapidly fatal effect of the intestinal lesions suggest the so-called "crises" of locomotor ataxia.

The subject is resumed by Doctor Enrich of the Wittingham Asylum, *Lancet*, May 18, 1895, who combats Doctor Cowen's theory of the causation of these disorders, and considers them only a result of the general cachectic condition. He says: "The theory of trophic origin can not be accepted as a satisfactory explanation of all intestinal affections met with in the degenerate insane after tubercle, syphilis, etc., have been excluded. Neither can it be said that trophic intestinal affections never occur; but they must be rare, much rarer than Doctor Cowen believes them to be. Only the careful sifting of cases, and minute examination of the nervous system, hand in hand with experiments, will assist in the differentiation of truly trophic lesions from other obscure ulcerative processes in the lower intestinal tract."

J. M. M.

CHRONIC RENAL DISEASE IN THE INSANE.—C. Hubert Bond, M. B., B. S. C., pathologist and assistant medical officer, London County Asylum, Banstead, found marked renal changes in 48 per cent of the cases in 154 autopsies at Banstead. At St. Bartholomew's Hospital, which also gets its patients from London, the percentage of cases showing diseased kidneys is 26 in 422 autopsies. It is thought that the larger percentage of kidney disease in the insane is closely related to the number in whom the cause of insanity is the abuse of alcohol, and that this cause is not stated on admission in one-half the actual cases.—*British Medical Journal*, March 2, 1895.

A CASE OF PUNCTURE OF THE BASE OF THE BRAIN BY THE SPOUT OF AN OIL CAN is reported by Horace M. Abel, B. A., M. R. C. S., L. R. C. P., and W. S. Colman, M. D., M. R. C. P., in the *British Medical Journal* of February 16, 1895. The patient, a railway fireman, fell on an oil can so that the spout entered the face a little outside the right angle of the mouth and passed up $6\frac{1}{2}$ inches, so that it entered the cranial cavity. He was completely unconscious for a few moments, but regained consciousness in less than an hour, and then were spasmodic movements of the limbs, which were most marked on the left side. Removal of the spout required considerable force, but was not followed by hemorrhage. After the spout was removed the most marked symptoms were drowsiness, mental confusion, complete paralysis of the left side of the face and left arm, and slight loss of power in the left leg. After a few hours, anaesthesia of the right eyebrow, right cheek, and both eyelids was noted. Muscular power was partially regained, but the anaesthesia remained and the patient was drowsy and apathetic and passed urine in bed. He could not recognize his wife or old friends, nor common objects, and could not remember anything that had occurred in the last twenty years.

The patient was re-examined nearly a year after the injury, when there

was still some left hemiplegia, most marked in the arm, and anæsthesia of the right side of the face. He was indolent, apathetic, emotional, and at times irritable. His memory had improved so that he could remember some events up to five years before the injury and from two months after it, but he could not remember passing events well, and was apt to get lost if out walking alone. It is supposed that the spout passed under the zygoma and through the great wing of the sphenoid into the centrum wall, injuring the anterior portion of the internal capsule, but that it did not extend to the cortex, as its length was not great enough for that.

THE GENESIS OF THE EPILEPTIC ATTACK.—Bechterew, *Neurologisches Centralbl.*, May 1, No. 9, 1895, thus sums up the results of investigations by himself and by others, Drs. Meyer, Suschtschenski, and Wyrubow, at his instance, on the genesis of the epileptic attack.

1. Electric irritation of the motor region of the cortex causes attacks of both partial (Jacksonian) and general epilepsy (the medullary epilepsy of some authors).

2. In the case of the first, the irritation of the motor tract must be locally limited, of moderate intensity, and of sufficiently long duration so that the excitation may gradually extend to other centers according to their proximity. Such extension causes, first, chronic contraction of other parts, first on the same side and later on the opposite side. As soon as the irritation has become general—that is, has extended to all the cortical motor centers—the local clonic convulsions become general, and after that, with further irritation, there is often a tonic cramp, with following clonic convulsions and coma.

3. Stronger electric irritation, especially if it involves a considerable portion of the motor cortex (which may easily be done if any large portion of one or both hemispheres is brought between the electrodes), causes from the beginning an attack of general or ordinary epilepsy, showing itself first in tonic rigidity of the limbs, followed by general clonic convulsions and coma.

4. Prior excision of one or several, or indeed of all, motor centers of one hemisphere does not render impossible the production of epilepsy by irritation of those remaining. The retention of a proportionately small part of the motor cortex of one hemisphere is sometimes sufficient to cause epileptic attacks from cortical irritation.

5. Whenever the whole motor region is removed the true epileptic attacks can not be caused, even by strong electric irritation. In such cases the excitation can cause only general tonic contraction, ceasing when the irritation is withdrawn.

6. After complete removal of the motor centers injections of essence of absinth, cinchonin, or cinchoidin, may in some cases cause epileptiform convulsions. In one cat with motor centers removed, that accidentally fell from a height of about four meters, I saw a generally tonic convulsion, followed by coma and immovable pupils. It should be stated that in this case there were not very marked clonic convulsive movements of short duration, which were not slight jerks, but were slower extensive movements of the limbs.

7. During the attack of ordinary epilepsy produced by electrical cortical

irritation, observed after excision of one or more, or of all, motor centers, usually all the body is involved in the general tonic cramps, while the clonic convulsions of these members, the centers of which are removed, are either lacking or notably weaker and of shorter duration than the others.

8. In case the greater part of the motor cortex is excised, the epileptic attacks from electric irritation differ from those with intact brain only in the shorter duration and imperfect development of the clonic convulsions, which are only of long duration in the members whose centers are intact.

9. If in the tonic stage of general epilepsy a quick and complete excision is made of the center of a limb, the contraction still continues, but the subsequent clonic contractions are notably weakened as compared with the other limbs. If the operation is performed in the clonic stage, this ceases sooner in the said limb than in the others.

10. If the electric cortical irritation is only strong enough to cause clonic and not tonic contractions of partial epilepsy, the members, the centers of which have been removed, usually are not contracted until the irritation is increased to the stage of producing tonic contractions. It must be said, however, that here, as in the conditions of 7 and 8, there are marked individual peculiarities of the animals used, as to susceptibility of the motor centers.

11. In the comatose condition that usually follows the general convulsion, further electric excitation generally fails to arouse contractions.

12. In newly-born whelps, of an age at which electric irritation of the cortex will arouse isolated (not clonic) contractions, the current, of whatever strength, fails to produce general epilepsy. In such there occurs only a general tonic stiffness that disappears with the cessation of the stimulus, or even before.

13. The epileptiform attack caused by pricking the pons in rabbits ceases at once if a section is made through the cerebral peduncle, and there remains only a general opisthotonos as the result of the latter.

14. After prior ablation of the hemispheres, pricking the pons will not cause epileptiform attacks as it will in uninjured rabbits.

The conclusion from the above is that epileptic attacks can be produced in adult animals by excitation of the cortical centers. In case the basal regions participate, it is mainly in producing tonic contractions. Under other conditions (mechanical irritation of the pons, cerebral concussion, and poisoning), the basal regions (pons and medulla) can also cause epilepsy. Still, in these cases the cortex undoubtedly takes part in the development of the attack, and the epileptiform character moreover depends upon its irritation.

ANOMALIES OF THE OCCIPITAL CONDYLE.—Obici and Del Vecchio, *Rivista Sperimentale*, XXI, i, April 25, 1895. Conclusions:

1. The occipital condyle in man, normally convex, abnormally varies between two extremes, the flat and the angular condyle.

2. The flat condyle is of either embryological or pathological origin.

3. The angular condyle indicates perhaps a degenerative type, as analogous forms have been observed in the lower animals.

4. In the angular condyle the anterior face is derived from that portion

of the basi-occipital nucleus that normally takes part in the formation of the anterior condyloid region; the posterior face forms the embryonal germ of the exoccipital.

5. The angular condyle is met with in 3.2 per cent of the insane.

This last conclusion has, however, a very limited value, as we have not been able to ascertain its frequency in normal individuals.

THE DEGENERATIONS SECONDARY TO CEREBELLAR LESIONS.—Pellizzi, *Rivista Sperimentale*, XXI, i, April, 1895, in a preliminary communication, thus sums up his results of observations on the secondary degenerations from injuries to the cerebellum. Summing up, in brief, the degenerative facts above described, we may conclude that:

I. Depending directly upon ablation of the median cerebellar lobe, we have:

1. Total degeneration of the fibres of the brachium conjunctivum and of all fibres emanating from it.

2. Degeneration of the internal fibres of the middle peduncle and of the fibres of the complex and deep layers of the pons.

3. All the degenerations met with in the pyramidal tracts.

4. Partial degeneration of different regions of the lemniscus.

5. Degeneration of the trapezoid and restiform bodies, and in the fibres passing from them to the inferior olive, in the ventral and median cerebellar tracts, and in the external arciform fibres.

II. Depending upon other lesions, and especially upon those of the cellular groups of the pavement of the fourth ventricle and the aqueduct of Sylvius:

1. Degeneration of the cranial nerves, especially of the fifth pair through its descending root.

2. Degeneration of a large bundle in the white reticular substance due to destruction of Deiters' nucleus.

3. Degeneration of the internal arciform fibres.

III. Depending upon ablation of the median cerebellar lobe, together with concomitant lesions of other nuclei.

1. Degeneration in the posterior longitudinal bundle of the fibres coming from the brachium conjunctivum and the nucleus of Deiters', and of fibres located internally to the descending root of the fifth pair.

2. All the degenerative changes in the cord consecutive degenerations of the retroflex bundles of the brachium conjunctivum, of the bundles of fibres from Deiters' nucleus, and from the posterior longitudinal bundle.

THE LASÈGUE SYMPTOM COMPLEX.—This hysterical condition, which consists in an inability to originate movements of the anæsthetic side without the aid of sight, though they can be continued without this aid, and even with only visual conceptions, or touch perception, is discussed in a psychological point of view by S. Landmann in the *Zeitschrift-Psychologie u. Physiologie der Sinnesorgane*, VIII, v, February, 1895. The following are his conclusions:

The functional disturbances known as the Lasègue symptom complex may be referred to the following psychic processes:

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1. The purely hysterical anæsthesia of one-half of the body makes, without the coöperation of sight, the commencement of an ordered movement, but not its continuation, impossible.

2. Anæsthetic arms, the muscles of which have been put into action with the coöperation of sight, are under the same laws as the normal members, inasmuch as their conscious activity is impossible with a conscious sense activity.

3. With a hysterical anæsthesia, functional disturbances may occur in the central motor tract, by which the extension of a movement is hindered. This may be in two ways, either through a mere separation of the motor center from the subcortical visual center, or through its simultaneous severance from the cortical cells that are requisite for consciousness of the movement.

4. Visual hallucinations in hysterical anæsthesia may replace the absent sensation in their action in suggesting movements to the motor center. But if there is with the non-anæsthetic side of the patient a normal connection between the consciousness of the movement and the motor center, the latter will not be thus excited into producing movements by visual hallucinations.

5. Visual perceptions of the anæsthetic side can be replaced by conscious motor representations on the sensitive half of the body.

6. An auditory representation can be separated from the corresponding visual one in an hysterical patient and connected with visual representation of another movement.

7. An auditory representation can be separated from the corresponding motor representation and connected with the opposite.

DUAL BRAIN ACTION.—Dr. L. C. Bruce, *Brain*, Spring, 1895, reports an interesting case that seems to point to the independent action of the two hemispheres of the brain. The patient, a Welshman, aged forty-seven, was received with a very defective history; had been insane fifteen years; was at first melancholic, but latterly noisy and destructive. While under observation he alternated between stupid dementia and maniacal excitement. In the former stage he was inactive, slow of comprehension, left-handed, and spoke little, and that only in Welsh. In the latter he was brighter, active physically and mentally, mischievous and destructive, was right-handed, and spoke English, though he understood also Welsh. In a short intermediate stage he was ambidextrous, restless, and spoke a little in both languages. In this English phase he wrote normally with his right hand and produced mirror-writing with his left; in the Welsh phase he wrote illegibly from left to right with either hand. During the English phase he remembered all that happened during corresponding phases, but had no recollection of his demented condition.

Distinct bodily symptoms characterized each condition, besides the right and left handedness already noted. In the English stage his functions were apparently normal, his appetite and circulation good, and his bowels regular. In the other his circulation was deranged, his extremities livid and often œdematous; he was constipated and had to be moved to make him go to meals. Sphygmographic tracings showed in the one stage a full pulse of high tension; in the other, one of markedly lower tension and less volume.

The most obvious explanation of this case is that suggested, viz.: A dual action of the brain and independence of the two hemispheres. That this was not absolute, however, seems to be indicated by the retention of speech and to some extent by the phenomena of the intermediate stage. There are certain points in regard to which fuller data would be useful, but the case, as reported, is very interesting and is suggestive as to the possible results of the fuller and closer study of other cases of circular insanity. It is possible that similar facts may be found by careful search in this special direction.

THE WEIGHT OF CRANIUM AND JAW IN THE INSANE AND IN CRIMINALS.—R. Gurrieri, *Archivio de Psichiatria*, XVI, iii, 1895, from a comparison of normal crania and jaws with those of the insane and criminals, concludes as follows :

1. The weight of the normal cranium is less than that of the insane, and the latter less than that of the criminal.

2. The mandible follows, to a slightly more pronounced degree, the same law.

RELATIONS OF TESTICLES TO BRAIN IN PARESIS.—S. Venturi, *Archivio de Psichiatria*, XVI, iii, 1895, from an examination of a series of paretics, in whom the brain weight and that of the testicles, together with the consistency of the latter, were examined, deduces the following :

1. In the insane the diminution in weight of the brain due to a precocious involutive process is almost exactly paralleled by a proportional diminution of the weight of the testicles.

2. The reduction in weight of the testicles is approximately paralleled by a diminution of its volume and consistency. Thus we may have, before death, in the diminution of the diameter of the testicles and their consistency, a useful approximative criterion for diagnosing the correlative cerebral atrophy, and, to a certain extent, its degree.

HOMICIDE IN THE MANICOMIO.—The Rome correspondent of *The Lancet*, March 23, 1895, reports the murder, by a patient, of the Marchese Berardi, one of the officials of the Manicomio, and writes a description of the management of the institution. The marchese was on duty, superintending a group of laborers employed in removing earth from the airing-grounds, and was suddenly assailed from behind by one of the laborers, a non-violent patient, who dealt him with uplifted spade a murderous blow on the occiput, resulting in "depression of the right parieto-occipital region, with fracture external to the depression, fracture of the internal surface and disintegration of the cerebral substance, subdual hemorrhage and probable fracture of the base of the skull." The victim died in a few hours. The following account of the Manicomio and its system of government, to which *The Lancet* correspondent attributes the accident, is appended. The institution, in some respects, has a record as honorable as any in Europe. It was one of the first on the continent to adopt the non-restraint system inaugurated by Tuke. Thanks to its enlightened patron, the late Pope Pio Nono, the "bath of surprise," the shackles, the straight waistcoat, and such like were either wholly

done away with or had recourse to only under rare and special circumstances. The "out-door employment" system was freely introduced, and under such excellent superintendents as Dr. Viale Prelà and, more recently, Doctor Fiordispini, the beautiful villas on the Janiculum were laid out for the reception of non-violent cases whose time (if paying patients) could be occupied in such intellectual or artistic pursuits as were congenial to them, or (if of the poorer or pauper class) by labor, agricultural or otherwise. Repeated visits are convincing of the thoroughness with which the non-restraint system has been carried out, and the success which has crowned it. There was one defect, however, in the insufficiency of attendants. Those on duty seem in the highest degree capable, but inadequately supported. In the Roman Manicomio this chronic defect has been aggravated by recent administration. According to its most able and efficient superintendent, Professor Bonfigli, it is a fact that no fewer than thirty among the "someglianti" and "infermieri" (keepers and male attendants) had, for a temporary cause, been dismissed—some of them had been on the staff of the Manicomio for over twenty years—and that, at the time of the recent murderous outbreaks among the patients, the personnel was dangerously undermanned. It is said that the author of this proceeding was no other than the Marchese Berardi himself. If so, that estimable man has expiated by nothing less than his life, an error in administration which, in hot-blooded populations generally, and particularly in their lunatic asylums, can never be committed with impunity.

FRIEDREICH'S DISEASE AND GENETOUS IDIOCY.—At a meeting of the Section of Medicine of the Royal Academy of Medicine in Ireland, held March 22, 1895, Dr. M. J. Nolan read a paper on "Three cases of Friedreich's Disease (Hereditary Ataxia) Associated with Genetous Idiocy." The ataxic subjects are aged, respectively, ten, fifteen, and twenty-two years, and are members of a family of eight, the remaining five being healthy and intelligent. There is a family history of tubercle, brain disease (cerebellar, maternal grandmother ataxic), and alcoholism. The father is a chronic drunkard. There is no syphilitic taint. The symptoms became evident in earliest infancy, and progressively developed from the lower to the upper limbs. They consist in jerky movements of the head, feet, and hands, "static ataxy" (Friedreich), and "ataxy of quiet action" (Friedreich), scanned speech, tremor and paresis of muscles, and "static" and "ataxic" nystagmus (Friedreich). In one case knee-jerk is retained; in one it is retained and exaggerated, and accompanied by ankle clonus; and in one it is lost. The girl has lateral curvature of the spine and arrest of sexual development. All are psychically asexual. The two oldest cases have large goitres. There is no club-foot deformity (a non-essential symptom) or ocular disease, the integrity of the sphincters is preserved, there is no marked disorder of sensation (apart from varying degrees of analgesia irregularly distributed in two of the patients), the electrical reaction of the muscles is normal. The patients possess a very low degree of intelligence, but a marked tractability and good humor of an expansive type, without irritability or tendency to unprovoked mirth. All the symptoms, physical and psychical, are in inverse relation to age; i. e., the

youngest are the most affected. No previous cases have been recorded showing an association of Friedreich's disease with genetous idiocy. The mental condition is devoid of the waywardness, sexual depravity, and violent outbursts so common to idiots. The possibility of an extension of gliomatosis to the cerebral hemispheres (idiocy so often arising from neuroglial sclerosis) is suggested as an explanation of this twin connection of genetous ataxy and genetous idiocy.—*The Lancet*, April 6, 1895.

THE TREATMENT OF EPILEPSY.—Wulff (of Langenhagen), Versamml. der Irrenärzte Niedersachsens und Westphalens, May 1, *Neurologische Centralblatt*, November 11th, condemns direct operative interference in epilepsy save in cases of Jacksonian or of symptomatic epilepsy, as of dubious value and dangerous. In reflex epilepsy operation for removal of the apparent exciting cause (excisions of scars, removal of growths in the nose, larynx, ears, etc.) may be of use. It must be remembered, however, that any operative interference may have a temporary good effect, and that many successes reported in the literature were estimated too shortly after the operation.

As regards medicinal treatment he finds borax, nitroglycerine, osmic acid, antipyrine, and acetanilide to be useless. Curari may, as a muscle poison, affect the attacks, but it has no effect on the disease itself, and is inconstant and dangerous. No results were obtained by him from the injection of normal nerve substance (Babes). Amylene hydrate (Wildermuth) has no lasting effect, but is often of value in status epilepticus and is to be recommended. The bromides are of all remedies the best. A cure is rare (only 2 per cent), but a favorable effect on the disease rarely fails to appear. Which bromide salt is best is hard to say, some suiting one case, others another. A mixture of the bromides of potassium, sodium, and ammonium is generally a good combination. The chief points to be looked to are: (1) a sufficient dosage (6, 10, or 12 grams per diem in 2 or 3 doses); and (2) a sufficiently long continuance of the treatment (several years, with gradually decreasing doses). When symptoms of bromism, acne, etc., are troublesome, ethylene bromate (Donath), which acts at least as well as the bromides, can be advised. It is, unfortunately, disagreeable in taste and smell, but is borne well by the stomach. If bromides act badly, belladonna may be used with success. Wulff has never seen cure from this agent, but has had good effects. It seems to work better in the form of Trousseau's pills than as atropine, always in increasing doses. Nothnagel has lately combined zinc oxide with the belladonna, the former in gradually increasing doses (0.03 to 0.3 sed), with good results, and this combination is to be recommended. Moeli has advised alternation of atropine and bromides as very effective, on the analogy of the opium-bromide treatment. Wulff has had no personal experience with this. Finally we have Flechsig's opium treatment, of which one can only speak well. Out of nineteen sufficiently observed cases, in two the treatment had to be discontinued on account of idiosyncrasy, in four the results were *nil*, in five complete cessation of the attacks, and in the other eight there was marked improvement in diminution of the number and the intensity of the attacks. This seems to be the most successful method up to the present; possibly Moeli's substitution of belladonna for the opium may be still more effectual. Two things

are to be considered in treating epilepsy: (1) diet, preferably vegetable, with absolute disuse of alcohol; (2) what is less generally known, or at least less considered, and nevertheless must be strongly urged, viz., absolute rest in bed. This sometimes has extraordinary favorable effects on the number and intensity of the attacks apart from all medication.

ALCOHOLISM.—Snell, Versamml. der Irrenärzte Niedersachsens und Westphalens, Hannover, May 1, 1895 (rep. in *Neurolog. Centralbl.* June 15th), gave the following statistics of the alcoholic cases in Hildesheim Asylum. During the last twenty years 15 per cent of the males received owed their insanity to alcohol. Taking the last forty years, however, the statistics gave only 11 per cent. It is probable that this last figure is too small and that the increase of alcoholism is only apparent. Since 1878, the following are the statistics of the asylum experience with this class of cases: Thirty-five per cent died in the institution, 22 per cent are still inmates, 13 per cent have been transferred to other asylums as incurable. Discharged, unimproved, 5 per cent; improved, 7 per cent. Five and one-half per cent were discharged as cured, but relapsed and were readmitted. Only twelve and one-half were permanently cured, or have so far remained well. The average duration of treatment was over two years.

Snell considers these unfavorable figures as due to the too late commencement of the treatment, and thinks endeavor should be made to have alcohol habitues committed to inebriate asylums before they become insane.

THE PATHOLOGY OF INSANITY.—We take the following report of the address on mental diseases before the Pennsylvania Medical Society, by Dr. F. X. Dercum, from the *Journal of the American Medical Association*, July 15th:

“The peculiar position which insanity has occupied in the past, in the minds of both the laity and of medical men, was first dwelt upon, and also the further fact was emphasized that the first attempts to provide for the insane were purely of a practical and utilitarian character, and embraced little more than the isolation and housing of the insane. The present status of the pathology of insanity was then taken up. The speaker alluded to the researches of Golgi, Ramon y Cajal, and especially of Lloyd Andriezen. It was pointed out that through these labors the structure of normal cortex was at length being revealed, and further, that, as Andriezen had shown, we were now in a position to correlate symptom with change of structure, at least in certain forms of insanity, for example, alcoholism. In the latter disease there are not only evidences of gross and general nutritive changes in the cell bodies, but also alteration and destruction of the fine naked collaterals and nerve terminals of the molecular layers of the cortex. These changes explain the diminished sensitiveness of the alcoholic subject to impressions from without, and also the general loss of memory and lack of association of ideas. Here was the first instance in the history of insanity in which it has been possible to correlate, closely, structural change and symptom. It was, however, pointed out that while such results are sufficient where the poison producing the changes is definitely known, microscopic examination can not give us all the information that we desire when the ini-

tial cause is not known. At most, it can only reveal to us the effects of pre-existing causes, and leaves us in the dark as regards the causes themselves. This fact led to the consideration of the subject from another aspect. The conviction is steadily growing in the medical mind that the actual agents which produce tissue changes are chemic-toxic substances of one kind or another; some of them absorbed or ingested from without, others the poisons produced by altered tissue metabolism, and others, still, the poisons elaborated by bacteria. The evidence upon this subject was briefly reviewed, especially with reference to the toxicity of the blood, the urine and other tissues in various conditions. The toxic substances themselves were classified as follows:

"1. Those which, though normal to the blood and urine in certain quantities, become toxic when in excess. In such conditions there is an intoxication of the nervous system from the mere accumulation of tissue waste.

"2. Substances which are present in the various diathetic insanities, some of which, in small quantity, are normal to the urine, while others are entirely new and foreign.

"3. Substances which result from disordered visceral action. Regarding these we have but little definite information. Enough is, however, known regarding the diseases of the kidney and diseases of the liver to indicate that the insanities associated with these conditions are in all probability the result of auto-intoxication.

"4. The toxic substances absorbed from without (excluding all poisons ingested as such). From much that we know we have reason to infer that in certain pathologic conditions poisons are formed in the stomach and intestines which react profoundly upon the nervous system.

"5. Toxins which are elaborated by bacteria.

"The various intoxications of the nervous system resolve themselves into two great groups, first, the auto-intoxications, properly speaking, which embrace, first, the substances normal to the blood and secretions, but present in excess; then, those substances due to general disturbance of tissue change which we meet with in diathetic conditions; and, last, the poisons formed by the disordered action of special viscera.

"In the second group we have those substances absorbed from the intestinal tract, some of which are produced by disordered chemic action and morbid fermentation, and others which are normally excreted by the intestinal tract, but now reabsorbed; then we have the poisons which are the direct results or accompaniments of infection. It was further pointed out that the various symptom groups which we recognize as forms of insanity may result from the most diverse agents.

"A plea was then made for the establishment of laboratories in hospitals for the insane, in which not only microscopic studies, based on the methods of Golgi, Cajal, and Andriezen, might be made, but in which, also, the chemistry and the physiologic action of the various toxic substances existing in the blood, urine, and tissues of the insane could be experimentally studied. Such investigations would be of great practical importance. They would enable us in the first place to treat insanity more intelligently, and indirectly would diminish the expense of the maintenance of the insane by the State."

SULFONAL AND URINE ANALYSIS.—M. Lafon had under treatment a patient who, in 1891, passed 183 grammes of sugar daily in his urine. In a few months all trace of glucose disappeared. For the last two months an average daily dose of seventy-five centigrammes to one gramme of sulfonal has been taken. A somewhat prolonged boiling of the urine with Fehling's solution invariably determines a characteristic reduction, although the polari-saccharometer reveals, not a deviation to the right, but slightly to the left. That the reducing properties conferred on the urine by the ingestion of sulfonal are not caused by any transformation of that drug in the system is proved by the fact that the addition of a medicinal dose (one gramme per litre) to urine quite free from sugar confers the same reducing power. The practitioner would thus do well to think of the sulfonal habit before he comes to the conclusion that the success of the copper test in any given case is indicative of the presence of glucose.—*The Lancet*, May 18, 1895.

TRIONAL, CHLORALOSE, AND SOMNAL AS HYPNOTICS.—Doctor Khmielewski of Odessa published in a recent number of the *Meditsinskoé Obozriénie* an instructive article upon the relative value of trional, chloralose, and somnal as hypnotics. He found that in asylum practice trional is a fairly certain and rapid sleep-producer, but that it is contra-indicated in melancholia, hypochondriasis, or whenever any mental depression is present. It should be exhibited in one gramme doses, which may be subsequently increased. Chloralose is somewhat less certain in its action; the amount required to produce sleep varies much in different cases and at different times in the same person. It acts more rapidly than trional, but the sleep is less prolonged. In doses larger than 0.5 gramme, slight symptoms of poisoning (spasms, etc.) frequently appear, but they soon pass away and need not cause alarm. It never causes headache or other unpleasant after-effects, which sometimes follow the use of trional. It may be given in cases where trional is contra-indicated, as in melancholia, hypochondriasis, and psychoses accompanied by depression. If there is any gastro-intestinal disorder, chloralose is, it is stated, almost the only hypnotic which can be given for a prolonged period without harm. Somnal was found, in the few cases in which it was given, to be a valuable and reliable drug. It produced sleep indistinguishable from natural sleep. In some respects it possesses advantages over trional or chloralose. It is, however, contra-indicated if any gastro-intestinal disturbance be present, as it tends to increase this.—*The Lancet*, April 20, 1895.

DISLOCATION OF THE LOWER JAW DURING AN EPILEPTIC FIT.—Dr. Cecil F. Beadles reports a case in *The Lancet*, April 20, 1895. The accident occurred in a youth aged twenty, who had been an inmate of Colney Hatch Asylum about two years and a half. He is the subject of chronic mania, with delusions, is often excited and quarrelsome, and has frequent epileptic fits, occurring more especially at night, but which interfere but little with his employment on the grounds during the day. He has a somewhat imbecile expression, with a peculiar, hesitating, slow manner of speech; moreover, his lower jaw has the appearance of being rather loosely articulated. Dislocation of the right condyle occurred during the night, while the patient was

in a severe fit, and its reduction was effected without difficulty when he recovered from it.

J. M. M.

ABUSES IN A RUSSIAN ASYLUM.—The *Lancet* correspondent in Russia reports (April 20, 1895) a particularly bad case of ill-treatment of asylum patients in the asylum of the Perm *Zemstvo*. The superintendent, an army *feldscher* named Mymrin, on the night of February 26th, sent out for a magnum of *vodka*, which he and five ward attendants drank. During the night, a patient, who had been making a noise, was struck by one of the attendants; the patient struck back, and a fight followed, in which the four other attendants and two other patients joined. The attendants, who were probably intoxicated, beat the three patients so severely that two of them subsequently died. The superintendent, though awakened, refused to interfere. The court before which the case has been tried has inflicted the following sentences: The attendants are to undergo four years' imprisonment, with hard labor; and the superintendent is condemned to exile in Siberia, with deprivation of all rights.

J. M. M.

BOOK REVIEWS.

Degeneration. By MAX NORDAU. Translated from the Second Edition of the German work. New York: D. Appleton & Co., 1895.

A distinguished German novelist wrote nearly forty years ago that one of the greatest delights of authorship was the consciousness of writing for readers from whom had been received a *quasi* power of attorney to formulate that which had long lain dormant in their own minds. Whether Nordau consciously intended to appeal to this vicarious egotism of his readers or no, he has made material concessions to it. Thousands of his readers will have their vanity of opinion confirmed by finding private judgment stamped with approval in printers' ink. With that unmixed delight, which it is given to the sturdy haters of shams to feel, thousands will read Nordau's long catalogue of false prophets, enthusiasts, sickening pretenders to what is miscalled art, and of quacks in every field of thought, properly analyzed and labeled. If it be a merit to call a spade a spade, Nordau's catalogue of literary and artistic monstrosities possesses merit of no mean order. He conducts us into what is substantially a "chamber of horrors," in which the busts of Oscar Wilde, Tolstoi, Maeterlinck, and Blavatsky occupy the highest pedestals.

Nordau's style is as easy and flowing as in his "Conventional Lies of Modern Society," resembling the ideal of a fiery newspaper editorial rather than that of a scientific treatise. It is simple justice to relieve the author from so much of responsibility as properly appertains to the unnamed translator: "*Was ich gedacht, ich eil es zu vollbringen*" is rendered, "My thought I hasten to fulfill"! Fortunately the translator allowed the original German to remain in the text, and indulges his unparallelable interpretation with a modestly contrived hiding-place in a foot-note.

An example of the author's felicitous manner of collating what individually appear to be trifles into a concretion of fierce arraignment is the following (pp. 10-11):

"The boudoir of the mistress of the house partakes of the nature of a chapel and of a harem. The toilet table is designed and decorated like an altar, a *prie Dieu* is a pledge for the piety of the inmate, and a broad divan, with an orgiastic *abandon* about the cushions, gives reassurance that things are not so bad. In the dining-room the walls are hung with the whole stock-in-trade of a porcelain shop, costly silver is displayed in an old farmhouse dresser, and on the table bloom aristocratic orchids, and proud silver vessels shine between rustic stoneware plates and ewers. In the evening, lamps of the stature of a man illumine these rooms with light, both subdued and tinted by sprawling shades, red, yellow, or green of hue, and even covered by black lace. Hence the inmates appear, now bathed in variegated diaphanous mist, now suffused with colored radiance, while the corners and backgrounds are shrouded in depths of artfully-effected *clair-obscur*, and the furniture and bric-à-brac are dyed in unreal chords of color. Unreal, too, are the studied postures, by assuming which the inmates are enabled to reproduce on their faces the light effects of Rembrandt or Schalcken. Everything in these

houses aims at exciting the nerves and dazzling the senses. The disconnected and antithetical effects in all arrangements, the constant contradiction between form and purpose, the outlandishness of most objects, is intended to be bewildering. There must be no sentiment of repose, such as is felt at any composition, the plan of which is easily taken in, nor of the comfort attending a prompt comprehension of all the details of one's environment. He who enters here must not doze, but be thrilled. If the master of the house roams about these rooms clothed after the example of Balzac in a white monk's cowl, or after the model of Richepin in the red cloak of the robber-chieftain of an operetta, he only gives expression to the admission that in such a comedy theater a clown is in place. All is discrepant, indiscriminate jumble. The unity of abiding by one definite historic style counts as old-fashioned, provincial, Philistine, and the time has not yet produced a style of its own. An approach is, perhaps, made to one in the furniture of Carabin, exhibited in the salon of the Champs de Mars. But these balusters, down which naked furies and possessed creatures are rolling in mad riot; these book-cases, where base and pilaster consist of a pile of guillotined heads; and even this table, representing a gigantic open book borne by gnomes, make up a style that is feverish and infernal. If the director-general of Dante's 'Inferno' had had an audience-chamber, it might well be furnished with such as these. Carabin's creations may be intended to equip a house, but they are a nightmare."

The 560 similarly suggestive pages of the work before us are divided into five "books." The first deals with the "Dusk of the Nations," which is the synonym proposed by Nordau for the Parisian expression *fin de siècle*. He, however, uses the French term on every possible occasion. We believe that the proper way to live down a silly term, as Nordau himself declares *fin de siècle* to be, is not to render it familiar by repetition and to actually make it the subject of a work, but to drop it. His interpretation of the *fin de siècle*, alias "Dusk of the Nations," is contained on the fifth page:

"One epoch of history is unmistakably in its decline, and another is announcing its approach. There is a sound of rending in every tradition, and it is as though the morrow would not link itself with to-day. Things as they are totter and plunge, and they are suffered to reel and fall, because man is weary and there is no faith that it is worth an effort to uphold them."

In crusading against the vices and defects of modern artistic and literary aims the author has not hesitated to distribute his blows so promiscuously, and to cover so large a territory with his skirmishers, that we would feel called upon to admire his boldness—did we not detect among his self-selected antagonists more windmills than warriors. His second, third, and fourth parts deal with and effectually dispose of Mystics, Pre-Raphaelites, Symbolists, Wagnerites, "Parodists of Mysticism," Ego-Mania, Parnassians, Diabolists, Decadents, Æsthetes, and Ibsenites, to conclude with a special analysis of what appear to be his special antipathies, viz.: Friederick Nietzsche, Zola, and certain "Young-German" plagiarists.

Briefly, this work may be characterized as an attempt to force modern literary aberrations into the Procrustean bed of the great Morel's "Dégénérescence," and failing to find Morel sufficiently elastic, to negotiate cast-off

clothes from Lombroso and Maudsley. While in subjecting such of his *bêtes noires* as Zola to this procedure, he is occasionally wittily epigrammatic (he describes one of his books as made up from the "mass book" and an "obstetrical manual"), he fails in every respect in proving anything novel or in fulfilling the grandiloquent promises of his dedication and opening chapter.

As demonstrating the lack of novelty in those very parts where an author is at his best, we can assure all who have read Addison, Smollett, or Thackeray that they can not fail to recognize a similarity in type between the superficial gadding about of art patrons of their day and of the period Nordau lives in and depicts in the following lines:

"We have seen how society dresses and where it dwells. We shall now observe how it enjoys itself and where it seeks stimulation and distraction. In the art exhibition it crowds, with proper little cries of admiration, round Besnard's women, with their grass-green hair, faces of sulphur-yellow or fiery red, and arms spotted in violet and pink, dressed in a shining blue cloud resembling faintly a sort of night-dress; that is to say, it has a fondness for bold, revolutionary debauch of color. But not exclusively so. Next to Besnard it worships with equal or greater rapture the works of Puvis de Chavannes, wan, and as though blotted out with a half-transparent wash of lime; or those of Carrière, suffused in a problematical vapor, reeking as if with a cloud of incense; or those of Roll, shimmering in a soft and silvery sheen. The purple of the Manet school, steeping the whole visible creation in bluish glamor; the half-tones or, rather, phantom-colors of the 'Archaists,' that seem to have risen, faded and nebulous, out of some primeval tomb; and all these palettes of 'dead leaves,' 'old ivory,' evaporating yellows, smothered purple, attract on the whole more rapturous glances than the voluptuous 'orchestration' of Besnard section. The subject of the picture leaves these select gazers apparently indifferent; it is only seamstresses and country-folk, the grateful clientèle of the chromo, who linger over the 'story.' And yet these, as they pass, stop by preference before Henry Martin's 'Every Man and His Chimæra,' in which bloated figures in an atmosphere of yellow broth are doing incomprehensible things that need profound explanation; or before Jean Béraud's 'Christ and the Adulteress,' where, in a Parisian dining-room, in the midst of a company in dress-coats and before a woman in ball dress, a Christ, robed in correct oriental gear and with an orthodox halo, acts a scene out of the gospel; or before Raffaelli's toppers and cut-throats of the purlieu of Paris, drawn in high relief, but painted with ditch-water and dissolved clay. Steering in the wake of 'society' through a picture gallery one will be unalterably convinced that they turn up their eyes and fold their hands before pictures at which the commoner sort burst out laughing or pull the grimace of a man who believes he is made a fool of; and that they shrug their shoulders and hasten, with scornful exchange of looks, past such as the latter pause at in grateful enjoyment."

Imagine a Nordau writing at the time and in the land of Queen Anne. The list of works of that period showing real originality is very short. Aside from Pope, Addison, De Foe, Gay, and fragments of Congreve, Pryor, and Cibber, these writings present only a picture of the corruption, luxury,

shallowness, and mutual admiration of the day. A Nordau would have left us a sad picture of the authors of this day, but he would have failed to give a due meed of praise to the real talent and genius for which it deserved credit. Hogarth, the faithful delineator of minutiae, shows us, in the drawing-room of Viscountess Squanderfield, in his "*Marriage à la Mode*," a fair paradigm for Nordau's description. Regarding a period of history but little more remote, Macaulay (History) says: "The fashion — a frivolous and inelegant fashion, it must be owned — which was thus set by the amiable Queen, spread fast and wide. In a few years almost every great house in the Kingdom contained a museum of these grotesque beauties. Even statesmen and generals were not ashamed to be renowned as judges of teapots and dragons; and satirists long continued to repeat that a fine lady valued her mottled green pottery quite as much as she valued her monkey, and much more than she valued her husband." We of the nineteenth century may claim thus much, that to become infected with maudlin enthusiasm over an "Angelus" or a "peach-blow vase," we need the skilled machinery of an advertising syndicate — and that we recover much more rapidly than our predecessors!

It is human nature to underrate what is good and overestimate what is bad in our immediate surroundings, while distance lends enchantment to our view of the past. But it is either a morbid or a soured pessimist who sees nothing and seeks for nothing but what is evil in his cotemporaries and selects from the past the best, not because he loves what is good, but because he can best depreciate his cotemporaries by creating an unattainable and untrue standard.

It strikes us that we poor degenerates may lay the flattering unction to our souls that, just as from the "commoner sort" came regeneration in and after the days of Addison, Hogarth, and Thackeray, so the "commoner sort" of this day contains all the elements of salvation needed, seeing that they mete out to deformity, indecency, and meretricious audacity, the ridicule, disgust, and contempt they so richly merit. As we do not claim to be musical critics we cannot follow the author in the anti-Wagnerian crusade with which he follows the above. If sound be reasoning which establishes from the appreciation of Wagner and the neglect of older masters an evidence of degeneration, then we may be permitted to indulge the satisfactory if selfish reflection that New York and Chicago rather than Boston and Philadelphia are oases of redemption, for verily the sale and cost of seats at performances of "*Il Trovatore*," "*Linda di Chamounix*," "*Freischütz*," "*Lucia di Lammermoor*," "*Cavalleria Rusticana*," "*Fidelio*," and "*Figaro's Hochzeit*" as contrasted with the sale and cost of seats at the "*Ring der Nibelungen*," preaches louder than proclamation the sermon that all is not lost in those two communities. Nay, the popular appreciation of the best parts in Wagner, as the "*Waldweben in Siegfried*," the funeral march in the "*Götterdämmerung*," "*Lohengrin*" and "*Tannhäuser*" as contrasted with the yawning neglect to which the "*Rheingold*" and "*Parcival*" are treated, seem to us to justify faith in a sound taste deeply rooted in the masses, and that from these masses, after all, must regeneration come. It were to be fervently wished that Nordau could have been present at a recent entertainment given by the leading German-American musical society. He would have been

struck by the look of hopeless bewilderment of some, of the visible effort born of courtesy to repress hisses on other, and the unmitigated disgust on all faces when Liszt's horrible malinterpretation of the "Lorelei" was performed, and he would have assuredly canceled this portion of his work.

We wish we could close our review at this point, nor would we have ventured to devote much space in a psychiatric journal to the review of what is not, in the narrower sense, a psychiatric work. There are features in Nordau's book which we are compelled to condemn and which, if we exhibit them in a light which, to many, may seem ludicrous, it is because so much of it as aspires to popularize anthropological and neurological matters merits unqualified censure. Such censure were unjust unless preceded by a complete and convincing exposure, and that this exposure involves the analysis of errors which, however serious, have also an involuntary humor about them, is Nordau's fault, and not the fault of his theme nor of the reviewer.

Under the head of Diagnosis, as he calls it, Nordau says:

"But the physician, especially if he have devoted himself to the special study of nervous and mental maladies, recognizes at a glance in the *fin de siècle* disposition, in the tendencies of contemporary art and poetry, in the life and conduct of the men who write mystic, symbolic, and decadent works, and the attitude taken by their admirers in the tastes and æsthetic instincts of fashionable society, the confluence of two well-defined conditions of disease, with which he is quite familiar, viz., degeneration (degeneracy) and hysteria, of which the minor stages are designated as neurasthenia. These two conditions of the organism differ from each other, yet have many features in common and frequently occur together; so that it is easier to observe them in their composite forms than each in isolation."

What would be thought of a physician who would say, pleurisy and pneumonia differ from each other, yet have many features in common and frequently occur together; so that it is easier to observe them in their composite forms than each in isolation? How would some of our literary magnates, suffering from nerve-tire after influenza, relish the consoling reflection that they were suffering from a minor stage (sic!) of hysteria?

Here is another fair sample of what Nordau calls "Diagnosis," page 33:

"It would be possible to cite examples by the dozen, of illusions of the senses suggested to excited crowds. Thus the hysterical allow themselves, without more ado, to be convinced of the magnificence of a work, and even find in it beauties of the highest kind, unthought of by the authors themselves and the appointed trumpeters of their fame. If the sect is so completely established that, in addition to the founders, the priests of the temple, the paid sacristans, and choir-boys, it has a congregation, processions, and far-sounding bells, it then attaches to itself other converts besides the hysterical who have accepted the new belief by way of suggestion. Young persons without judgment, still seeking their way, go whither they see the multitude streaming, and unhesitatingly follow the procession, because they believe it to be marching on the right road. Superficial persons, fearing nothing so much as to be thought behind the times, attach themselves to the procession, shouting 'Hurrah!' and 'All Hail!' so as to convince themselves that they also are really dancing along before the latest conqueror

and newest celebrity. Decrepit gray-beards, filled with a ridiculous dread of betraying their real age, eagerly visit the new temple and mingle their quavering voices in the song of the devout, because they hope to be thought young when seen in an assembly in which young persons predominate."

Speaking of the amount of noise "the fashionable coxcomb," the æsthetic "Gigerl,"* and the "inquisitive street-loafer" make in contradistinction to "far larger numbers of sane men who, without self-seeking afterthought, take quiet enjoyment in works of sane talent," he seems entirely oblivious of the fact that his tacit admission of a majority of sane men is the best neutralizer of his pessimistic rant. Nor need we attempt to strengthen the *dementi* Nordau has given himself by stating any such truisms as that even among the "crowd" he characterizes the fools are not necessarily insane, the young not necessarily imbecile, the old not necessarily in their second childhood, and finally that the contagion and sympathy of crowds are not morbid but natural phenomena. The chasms left in Nordau's chain of reasoning are much more startling than those committed by many of those whom he dictatorily places in the categories of "degenerates." On page 33, without any detailed proof, he concludes a chapter with the gratuitous assertion: "And this crowd, because *it is driven by disease, self-interest, and vanity*, makes very much more noise and bustle" than the aforesaid sane majority. The next chapter, with refreshing *sang-froid*, opens with these words:

"We have recognized the effect of *diseases*† in these *fin de siècle*‡ literary and artistic tendencies and fashions, as well as in the susceptibilities of the public with regard to them, and *we have succeeded in maintaining* that these diseases are degeneracy and hysteria."

Are vanity, imitation, curiosity, desire for novelty, in themselves degeneracy? They are not! And just as positively as the consensus of mankind will agree with us in this, the searching reader of Nordau's book will agree with us that he has kept the method by which he "succeeds in maintaining that these diseases are degeneracy and hysteria," as profound a secret as the one by which he has proven that they are diseases at all.

In a number of places where his pronunciamento is particularly deficient in fact and reason, Nordau resorts to inuendoes. One favorite inuendo is that the philosophy of the "Nietsche gang" (Nordau's words) is the result of deliberations in "pot-houses" and at "bars." If this is an evidence of degeneration, then is degeneration in philosophical and literary endeavor as old as the German student's "*Commersbuch*,"§ and coeval with the days of Hegel, Schelling, and Fichte. Nordau's *bêtes noires* might suggest that it was on his numerous excursions to pot-houses and in company with commercial travelers|| that he himself picked up such language as this: "Literary Mafia,"

*Viennese for "fop" (translator's footnote). "Dude" is the more recent vernacular equivalent.

† Vide *supra*. The italics are ours and employed notwithstanding Nordau's declaration that their use is an evidence of "degeneracy."

‡ These italics are Nordau's.

§ P. 523, Leipziger *Commersbuch*, the last lines of one verse read: "Und ich hörte die Collegien Abends auf der Bierbank." Nordau is the first writer to recall such adolescent readings, and in one sense of the word, but scarcely flattering to himself, we feel indebted to him.

|| He compares Gregor Samarou's kings and princes to "commercial travelers."

"miserable balderdash, without color, taste, or connection with time and space, and which a tolerably conscientious editor of a newspaper even half a century ago would have thrown into a waste-paper basket as altogether too musty"; "the practice of thieves scampering away from a policeman"; "the real Nietzsche gang consists of born imbecile criminals and of simpletons, drunk with sonorous words" (p. 469); "*gallows birds without the courage and strength of criminal actions*"; "plagiarists, so low down in the scale"; "lads" who will find their way to their "natural vocation" as "restaurant-waiters, servants, night watchmen, or pedlars," if they do not disappear as drunken vagabonds, beggars, "or perhaps even in a house of correction"; "fabulous stupidity and abcedarian ignorance" (page 440); "when a fellow like this Dr. Max Zerbst" (p. 455); "the imbecile author of the latter parody" (p. 444); "Adolph Kniep, another imbecile"; "and such babble of brainless parrots"; "denseless spiriting jet of words"; "abortions of frenzy," and so on for entire chapters. Several of those whose colleagues have been thus severely dealt with have assumed, we think unnecessarily, a defensive attitude, and even retorted on Nordau in kind. Calling names is not argument, and as Nordau's book consists of little else than diatribe, even his most sensitive victims could have dispensed with such an assertion as that Nordau was himself a "degenerate." It was unnecessary to intimate that as a lunatic is apt to regard himself as the only sane being in his environment, so Nordau sees nothing but degeneration and disease outside of his own personality. It is not in good taste to do as one cisatlantic admirer of Ibsen has done, to classify Nordau in his own museum of terrible examples, as an "ego maniac." All that was necessary was to quote the one distinguished writer whose evidence the author of "Degeneration" will unquestionably acknowledge, namely, Dr. Max Nordau, who says (p. 44): "Those obscure or superficially verbose works which pretend to offer solutions for the serious questions of our times, or at least to prepare the way thereto, are even impediments and causes of delay, because they bewilder weak or unschooled brains, suggest to them erroneous views, and make them either more inaccessible to rational information or altogether closed to it."

If matters literary were really in as bad a way as Nordau represents it, statistical evidence, which we are fortunate enough to be able to place before our readers, ought to demonstrate it beyond appeal. How do we find it in the very land whose language Nordau writes in?

	Total Number.	Number Insane.	Number Eccentric	Total Morbid.	Per mille Insane.	Per mille Eccentric	Per mille Morbid.
German writers born before the 19th century...	1,805	46	27	73	27	14	42
Ditto born during the 19th century*... ..	1,565	18	13	31	11	8	19

* *Lexikon der deutschen Dichter und Prosaisten von den ältesten Zeiten bis zum Ende des Jahrhunderts.* Bearbeitet von Franz Brümmer, publ. by Philip Reclam, Jr., Leipzig, 1884, und *Lexikon der deutschen Dichter und Prosaisten des 19 ten Jahrhunderts*, *ibid.* 1885. Only the authors from A-L inclusive could be considered at this time, but the reviewer is sufficiently familiar with the lacking volume to state that these figures average fairly well.

This is certainly no bad showing for the despised moderns.

The only explanation we can find for the appearance of this work is a desire to write startling things *conte qui conte*. Not finding sufficient indisputable evidence of degeneracy in Wagner, Ibsen, and Schopenhauer to warrant the manufacture of a very loud sensation, Nordau was compelled to descend to the lowest strata of literature—that debatable one where the three territories of mediocrity, morbidity, and plagiarism are mingled—in order to season an unpalatable dish with overwhelming spices. The greater number of the terrible examples cited are of a class of authors not at all peculiar to the close of the nineteenth century. Writings of the class which give Nordau so much concern to-day existed long ago. The people who ate the sandwiches wrapped up in the pages of Clauden, Minckwitz, and Platen are long dead. Those who *faute de mieux* may use the pages of Nietzsche, Wilde, Zola, and Sudermann* for the sandwiches of the future are of our generation, and such works, if to be found at all in antiquarian catalogues, are as likely to be accompanied to that bourne of merciful oblivion by Nordau's last work as by anything we can conceive of.

The extravagant adulation of Lombroso,† taken in conjunction with Nordau's uncritical devotion to that writer, and the enthusiastic notices of so much of the press as is under the control of Nordau's sensation-monging countrymen of the de Blowitz and Jacques St. Cere sort, strike us as comical in a work the body of which contains the following :

"There is yet another phenomenon highly characteristic in some cases of degeneracy, in others of hysteria. This is the formation of close groups or schools, uncompromisingly exclusive to outsiders, observable to-day in literature and art. Healthy artists or authors, in possession of minds in a condition of well-regulated equilibrium, will never think of grouping themselves into an association which may at pleasure be termed a sect or band, of devising a catechism, of binding themselves to definite æsthetic‡ dogmas, and of entering the lists for these with the *fanatical intolerance* of Spanish inquisitors." (Italics ours.)

We ask the reader to collate the above with the following from Nordau's dedication to Lombroso :

*This, the least pure and least original of recent German writers, remarkably enough has been stamped with the seal of Nordau's approval.

†It is remarkable that Nordau, who seems overready to accept on dits concerning Nietzsche and others, does not refer to the enforced retirement of one of his favorites to a sanitarium near Berlin.

‡We need but refer to the laborious, conscientious and exhaustive researches of Dr. A. Bär, chief physician to the great state-prison Plötzensee, near Berlin: *Der Verbrecher in Anthropologischen Beziehung* (Leipzig, 1893). This author retraverses Lombroso's ground and demolishes with a crushing array of indisputable facts, one theorem after another of that sensationalist. The amenities of scientific literature are such that no reader will find any such verdict as deliberate falsehood rendered. It is left to him to draw his own conclusions. Nor will he find such terms applied to Lombroso as "crazy," "plagiarist," "insane drivell," et cetera, which are applied in Nordau's book to authors no more fanciful than Nordau's master. Von Helder (*Archiv. für Anthropologie*, Vol. xxiii, p. 195) states, without any subsequent contradiction—as in fact Baer's critique has remained unchallenged—that Lombroso's so-called type is repudiated in France and Germany.

§Or any other dogmas; of the pseudo-sciences, for example.—Reviewer.

"On numerous obscure points of psychiatry,* criminal law, and sociology you have poured a veritable flood of light, which those alone have not perceived who obdurately close their eyes, or who are too short-sighted to derive benefit from any enlightenment whatsoever."

It strikes us that of the spurious cults of the present day one of the most empty, vague, and at the same time insistent and self-advertising is furnished by the "*uomo delinquente*" school. We need lose no time before our readers in disposing of this aberration of science. It hoodwinked contemporaries by starting with an apparently scientific endeavor to bring cranial and cerebral anomalies, ontogenetic and other morphological deviations into some system, as collateral facts in the study of mental defects. It concluded with such wild absurdities as the classifying of tattoo marks and chemical peculiarities. It is dying the death it deserved and such requiems of mutual admiration as are sung by Bohemians—literary scientific, and mongrel—will soon sound their last diapason.

The pupil who, with his master Lombroso, would have gravely catalogued the tattooed mark on "little Willie's" arm in Marryat's "The King's Own," as a stigma of the "*uomo delinquente*," appears worthy of his master in the following :

"At the base of all oddities of costume, especially that of women, there is hidden an unconscious speculation in something of a sexual psychopathy, which finds incitation and attraction in the temporary fashion in dress. No professional person† has yet viewed fashions from this standpoint. I may not here allow myself so broad a departure from my principal theme. The subject may, however, be most emphatically recommended to the consideration of experts. In the domain of fashions they will make the most remarkable psychiatric discoveries."

On which side of the examining table these remarkable psychiatric discoveries are to be made, Nordau fails to specify. We trust he will not be present in the flesh when that examination is made.

Our unhappy author is so disgusted with not alone the unnatural excrescences, but also the natural and inevitable accompaniments of civilization, that one might feel tempted to recommend him, for his own peace of mind, to sojourn with some one of the few simon pure tribes of "undefiled children of nature." On second thoughts, the kindly disposed will cancel this suggestion, mindful of the fate of Lamanon, the companion of La Perouse, who, having maintained one evening, in conversation with his companions, that the savages were much better than we cultured races, was killed by those very savages the next day. The same fate overtook J. W. Helfer who, writing from the Andaman Islands: "So these be the much feared wild men! They are but the timid children of nature," was slain by those fear-ridden children of nature precisely twenty-four hours later.

Just as Nordau has been one-sided in exaggerating the moral, literary, and artistic faults of his own generation, he has been one-sided in his application

* This alienists have to see the first evidence of.

† Has any sound, decent "person" ever done so before?

of his strictures to a few of the people inhabiting this globe.* Sexual perversion, for example, seems to him to be a product and accompaniment of higher civilization. Let us see what competent ethnologists say aient this and similar alleged defects of organized communities, while at the same time they are writing intelligently about another "*fin de siècle*" period:

"In the second half of the last century, European thought was imbued with a distinctive emotional tinge. A sort of disgust of civilization, a discomfort, a depression, which could not be accounted for, had taken possession of the best minds of Germany, France, and England, and drove them out of the real into a world of unhealthy ideals. This peculiar emotional disorder is displayed in the writings of J. J. Rousseau; * *

* * it went on further in the bloody conceptions of the French Revolution; it has stamped the poems of Friedrich Schiller, while Gæthe, in his 'Sorrows of Werther,' strove to remove unsound sentimentalism and to purge literature of this *materies morbi*. No one, however, was more affected by this emotionalism than George Forster, as also, to a greater or lesser extent, the great Cook and all his followers, who stoutly maintained that the savages were better than the Europeans. The refinements of olden times appeared to them only as aberrations; everywhere they perceived crimes against nature, a mixture of calumnies and lies, and consequently those born in the Old World appeared to them as devitalized and bodily shattered.

"These were not the opinions of a few eccentrics, but of men who molded the opinions of their day, and at the same time its brightest stars. They believed to see in the inhabitants of the South Sea the types of an ideal and golden humanity. They considered them honest, frugal, unspoiled, as children incapable of distinguishing good and bad, as infinitely happy, if not worthy of envy."

"The oft-praised bodily charms of children of nature wandering without restraint are usually absent in the photographic reproductions which reach us; and when actually present, escape the risks incident to customs growing out of a perverted taste, with the absence of the most important care of the body, namely, cleanliness. The hair remains unkempt, the teeth uncleaned.

"We look for certain vices only among high, refined, and low, degenerate races, among the Greeks and the later Romans. He who is a little acquainted with the old Spanish descriptions of American tribes knows very well that they were identified with refinements of which neither the Romans, when Tiberius sojourned at Capri, nor the Byzantines when Theodora, later the wife of Emperor Justinian, traveled around with theatrical bands, had thought of. We need but add to this that nearly all these people were acquainted with poisons which destroy the productive seed of humanity, and used them with thoughtless frivolity."

Near the conclusion of his work, Nordau, who has obtained what little

* He speaks of the French as the insane nation *par excellence*, and repeatedly, notwithstanding some formal disclaimers unpleasantly and chronologically linked with his removal to Paris, speaks of the French as crazy. He says nothing in this connection of Hungarian megalomania, although he might have found precedents for that term.

science his work contains from Griesinger, Mendel, Morel, and Westphal, pays his respects to the profession to which they belong as follows:

"Medical specialists of insanity have likewise failed to understand their duty. It is time for them to come to the front. 'It is a prejudice,' Bianchi* justly says, 'to believe that psychiatry must be inclosed within a sanctuary like that of Mecca. It is no doubt meritorious to indurate sections of the spinal cord in chromic acid and tint them in a neutrophyllic solution, but this should not exhaust the activity of a professor of psychiatry. Neither is it sufficient that he should, in addition, give a few lectures to jurists and publish observations in technical journals. Let him speak to the mass of cultivated persons who are neither physicians nor learned in law. Let him enlighten them in general publications† and in accessible conferences concerning the leading facts in mental therapeutics. Let him show them the mental derangement of degenerate artists and authors‡ and teach them that the works in fashion are written and painted delirium. In all other branches of medical science it is discerned that hygiene is of more importance than therapeutics, and that the public health has much more to expect from prophylactics than from treatment. Popularized expositions from the pens of experts whose prominent official status would recommend them to the reader would restrain many healthy spirits from affiliating themselves with degenerate tendencies.

"Such is the treatment of the disease of the age which I hold to be efficacious: Characterization of the leading degenerates as mentally diseased; unmasking and stigmatizing of their imitators as enemies to society; cautioning the public§ against the lies of these parasites."

Nordau can not lay claim to immunity on the score that he does not know anything whatever of the matter he is writing about in the above. He is at least nominally a physician, though lacking in that humanity towards the insane which is not only a matter of duty with alienists but of any and every physician. He has exhibited such glaring ignorance of what has been and is being done in scientific psychiatry, and demonstrated such a stupendous incapacity to grasp its humane aims, that we feel no compunction in repudiating one who has added to the list of feuilletonistic sensationalists who are responsible for the unjust aspersion that "doctors can find insanity anywhere." Nordau affects to speak as a psychiatrist where it suits his purpose, but doffs the psychiatric disguise when he can pose, or thinks he can pose, as a clever paragraphist. It is our duty to tear the mantle of science from unworthy shoulders, and we do not believe that any refuge outside one which the ostrich is libelously credited as using when hunted is available for Dr. Max Nordau.

*As the original article is not accessible to us, we quote the passage as we find it, leaving the responsibility for any erroneous rendition where it belongs, viz.: Between Nordau and his translator.

†At least a dozen such works exist in Germany alone. The entire passage is based on abridged assumptions.

‡The condition of this author's work justifies a "*quis custodiet custodiet*."

§*Quis custodiet custodiet*.

Under ordinary circumstances a writer who criticises his cotemporaries may find a certain degree of myopia desirable, but he who writes under the guise of an anthropologist must be able to see beyond his fingers! Nordau has not the first qualification of an historian — that of being able to step to the same distance in comparing one historical landscape with another. He can only see of past epochs the prominent which survives, and of our epoch he not only fails to discriminate between high and low, bright and dull, good and bad, but seems to have had his attention monopolized by the low, the dull, and the bad; in fact, he is guilty of realism in the worst sense of the word, as, for example, the one he condemns in Zola.

Failing to recognize that scientific endeavor often occupies new territories and travels in new directions, Nordau has yet to learn the lesson that scholastic metaphysics are being supplanted by psychological physiology. He seems to have failed utterly to grasp the fact that it is the effete and supplanted sciences and arts — the more mystical the better — which charm the atavistic mind of the paranoiac and harmonize with the so happily termed “insane temperament.” Thus alchemy, heraldic symbolism, astrology, and searches for the ten lost tribes in our day. Thus it is that Nordau is enabled to insult Germany by citing a Nietzsche as a prominent philosophical writer of that country.* He has not even a bare mention for the great Wundt! Thus he whom Calderwood and Hartmann’s feeble attempts to harmonize the old and the new philosophy might have shown the way the wind of metaphysics is blowing, does not recognize the Huxleys, Tyndalls, Paul Berts, Meynerts, and Preyers as philosophers. If Nordau’s metaphysics are a century behind the age, his science is unfortunate in being as much wrongly in advance of it; in the same direction as the pseudo-astronomy of Camille Flammarion and the pseudo-zoölogy of Jules Verne. In fact, there is only one pseudo-science with which his philosophy is synchronous, and that is dead just about three years — the pseudo-anthropology of Lambroso.

E. C. SPITZKA, M. D.

Elements of Psychiatry. Clinical Lectures. Part I. Psycho-physiological introduction. By DR. C. WERNICKE. Leipzig: G. Thieme, 1894.

Wernicke, the author of the most comprehensive German work on diseases of the brain, offers us the first part of a work on mental diseases. As might be expected from the author of the modern knowledge of aphasia, the tendencies of the work go in the direction of subordination of the mental diseases in the list of diseases of the brain; as such, the introduction is very suggestive and a valuable attempt to base psychiatry on a more substantial basis. At the same time we must confess that we find in it more indications of what we would conclude on a theoretical basis than of what we can consider as well-proven facts. It is to be expected that the following parts will furnish valuable material as a basis for the somewhat dogmatic statements on the minute localization, the theory of memory-cells, etc. The present pamphlet (80 pages) is warmly recommended on account of its clearness and its sound originality.

A. M.

* Who will undoubtedly owe any dubious immortality he may gain to the mistaken policy of Nordau’s criticism. We doubt whether, outside the paranoiac circle, Nietzsche was ever cited.

Essays from the Clinique for Mental Diseases at Breslau. Edited by PROF. DR. CARL WERNICKE. Part II, 21 plates with 44 figures. Leipzig: Georg Thieme, 1895.

The first part of this series was published in 1892. It consisted in a very thorough paper on the occipital lobes by Dr. Heinrich Sachs, and was dedicated to the memory of Dr. Heinrich Lissauer, former assistant of Professor Wernicke.

The second part, which is now before us, contains four contributions of great interest.

1. Dr. Paul Kemmler: On convulsions in progressive general paralysis, consisting in twitchings synchronous with the pulse.

The paralytic attacks are generally subdivided into apoplectiform and epileptiform seizures. The epileptiform seizures may be general tonic-clonic convulsions, or follow the Jacksonian type. Besides this, Doctor K. establishes a third type characterized by rhythmic twitchings synchronous with the pulse. He observed them in thirty-five cases, among whom there were only two in whom the diagnosis of general paralysis was uncertain; twenty among 200 cases of general paralysis in the clinique of Breslau showed them. The twitching would be limited to one limb, or to one side of the body, or be general. The rhythmic contractions are accompanied by a moderate tonic contraction of the muscles, increased muscular irritability, and increased myotatic reflexes. The imitation of the pulse-curve and its variations is quite striking, especially where the action of the heart is irregular. These attacks seem not to go over into genuine epileptic fits in the course of one and the same seizure.

Compression of the abdominal aorta did not influence the twitching in the leg; compression of one carotid was useless; compression of both carotids caused too alarming symptoms to be long continued. It seems that the pulsation of the entire brain, not a single artery, causes the rhythm. Doctor K. compares the whole with the pulsating headache frequently noticed in the insane.

Application of ice to the head helped most cases. Ice was also used to lessen the action of the heart. Bromides are useless. Besides chloroform and chloral hydrate, the author used with good success amylene hydrate—6 grammes given in a 5-10 per cent solution as an enema. The best prophylactic measure is rest in bed.

For the numerous details the original must be consulted.

2. C. Wernicke: Two cases of cortical lesions. A contribution to the localization of memories. The two cases are almost identical; a lesion of the arm center, followed by little paralysis of motion and tactile sense, but very marked disturbance of the power of recognizing objects with the sense of touch. W. calls attention to the great contrast with lesion of peripheral nerves, almost complete loss of sensibility and sense of localization, but relatively little disturbance of the power of recognizing objects by palpation. W. considers the two cases to be a proof for his theory that the tactile memories for the recognition of objects are located in the motor area.

3. Dr. Heinrich Sachs: The brain of Förster's case of cortical blindness. Everyone familiar with the clinical material of hemianopsia knows the

remarkable case of Förster, which developed first a complete right-sided hemianopsia, with almost perfect vision of the remaining half, and five years later a hemianopsia of the left side as well, but not of the central vision. The remaining central field was respectively 1° , 3° , $2\frac{1}{2}^\circ$, and $\frac{1}{2}$ per cent. The visual acuity one-half—instead of becoming soul blind on account of destruction of both visual areas. Förster rejected the idea that the macula lutea might have a special center apart from the rest of the visual area (for instance, as English authors claim, in the parietal lobe and angular gyrus); but he came to the conclusion that part of the calcarine area was remarkably well supplied with blood vessels from two chief arteries, and that the macula was represented by this most favorably situated cortex. The autopsy proved that a small portion of the calcarine area of the right hemisphere remained intact, and in connection with the corpus callosum and the primary optic ganglia. It would lead too far to give in a book-review a detailed account of the very excellent microscopic examination of the two hemispheres, which should be studied by every one working on the brain and its secondary degenerations. The deduction regarding the elucidation of the central organ of vision is also very remarkable. Doctor S. distinguishes in the optic centers a sensory and a motor area with sensory-optic and motor-optic memories respectively. It is the interruption of the connecting tracts and the partial destruction of one of the two areas that explains why the patient had a very poor orientation, etc.

4. Dr. Ernst Hahn: Anatomical examination of Lissauer's case of mind-blindness. Lissauer described the case in the *Archiv. für Psychiatric*, and expected to find a lesion in both hemispheres. There was, however, only destruction of the left visual area and of the splenium of the corpus callosum.

The perusal of the original can not be too highly recommended. A. M.

The Female Offender. By PROF. CÆSAR LOMBROSO AND WILLIAM FERRERO. With an Introduction by W. DOUGLAS MORRISON, Her Majesty's Prison, Wandsworth. The Criminology Series, Edited by W. DOUGLAS MORRISON, M. A. New York, 1895.

This work is an authorized translation of that portion of Lombroso's *La Donna Delinquente* which deals with the female criminal. With its introduction by its English editor, it forms a valuable addition to the literature of its subject in our language, and is well worthy of the attention of English-speaking alienists, in that it treats of conditions to a certain extent allied to and sometimes actually including positive mental aberration. In his introduction, Mr. Morrison makes a plea for the recognition of and consequent proper provisions for the element of degeneracy and alienation in the criminal, as a necessity for the protection of society and the abolition of recidivism. While the female criminal class is a comparatively small one, and in certain regards already subject to a more specialized treatment than is the corresponding one of the male sex, the points made by him are still to a large extent valid and relevant.

The first half of the work is taken up by a discussion of the anthropology of the female criminal. The most striking result of this study is that, while

female criminals display, as compared with normal women, a very marked prevalence of degenerative stigmata, yet, as compared with male offenders, the criminal type is rare, understanding by this the presence of at least four prominent degenerative stigmata. It is only in the demi-criminal class, the prostitutes, that any close approach is made to the male ratio. The reasons here given for this are as follows: The female is nearer the type of the race, and her atavistic aberrations, according to the Lombrosian theory of crime, will be more in the direction of the primitive woman, who was rarely a murderer, but always a prostitute; her congenitally slighter inclination to criminality; the comparative inactivity of the cerebral cortex in women, leading less frequently to degenerative processes for irritation; her more sedentary life, and consequent lessened liability to exposure; sexual selection, etc. "In short," he says, "the female criminal is of less typical aspect than the male, because she is less essentially criminal; because in all forms of degeneration she deviates to a less degree; because, being organically conservative, she keeps the characteristics of her type even in her aberrations from it; and finally because, beauty being for her a supreme necessity, her grace of form resists even the assaults of degeneracy."

While the great mass of the female offenders are only of the class of occasional criminals, the comparatively rare instances of the "born criminal," the true criminal type, are apt to be even more essentially diabolical than the males of the same class. We have also an almost exclusively female phase of iniquity in the hysterical calumniators and mischief-makers, who, while not usually themselves guilty of the more desperate crimes, can hardly be considered, in many instances at least, as less morally deficient than the "born criminals" themselves.

Female criminal lunatics seem to be also in less proportion, and this Lombroso attributes largely to the minor prevalence of alcoholism and epilepsy in females. The chapter on this subject is a brief one, and by no means exhaustive, but gives the principal facts, as shown by the investigations of Sander, Salsotto, Savage, Marro, and others.

As a whole, the book is one we can recommend to our readers, as containing a large amount of valuable information scientifically discussed. Those who are not in accord with the special ideas of Lombroso will perhaps find in it less with which to disagree than in some of the other works of the same author.

La Confusion Mentale Primitive. Stupidité, Démence Aigue, Stupeur Primitive. Par le DR. PH. CHASLIN, Médecin Adjoint de l'Hospice de Bicêtre, etc. (*Primary Mental Confusion. Stupidity. Acute Dementia, Primary Stupor.* By DR. PH. CHASLIN.) Paris, 1895.

In this volume we have the recognition of types of mental disease that have been rather neglected by French alienists, the primary dementia and confusional insanities. We say "types" rather than "type"; for it does not seem clear to us that we have, in all the forms from simple confusional delirium to complete stuporous dementia, what can be recognized in any proper classification as a single clinical species. As a psychological entity, however, it undoubtedly exists, and appears under the most varied forms, illus-

trating, perhaps better than anything else, the difficulties of reconciling a psychological and a symptomatic classification in insanity.

The special subject of this volume is the primary idiopathic confusional insanity, the symptomatic and secondary conditions clinically corresponding to this being incidentally and less elaborately treated. After an historical sketch, in which he reviews very thoroughly all the principal literature, showing that the later French school of alienists have, following the lead of Baillarger, generally relegated this to the type of stuporous melancholia, Delasiauve and one or two others excepted, while it has been more or less fully recognized by the German, English, Russian, Italian, and American writers. As a bibliographical study, this portion of the work is a very valuable one and will be of service to future students.

The symptomatology is given in detail, and the clinical description is admittedly a little forced, as cases with full typical characteristics are hardly the rule. The chapters on the psychological pathology and the place in the classification are deserving of careful study for a thorough understanding of the actual value of this form as a definite type of mental disease. As regards its etiology, the question of predisposition and inherited defect is discussed in the latter chapter, as well as specially under its own head, and M. Chaslin's conclusion is that while predisposition may exist, the disorder requires an external cause, which is probably generally to be looked for in some toxic infection. His definition — given provisionally, it is true — is as follows: "Primary, idiopathic mental confusion is an affection, ordinarily acute, consecutive to the action of a cause, usually appreciable and generally an infection, which is characterized by somatic phenomena of denutrition, and by mental symptoms, the essential basis of which, the primary result of the bodily condition, is constituted by a form of mental enfeeblement and intellectual dissociation and mental confusion, which may be accompanied, or not, by delusion, hallucination, and agitation, or, on the other hand, by motor inertia, with or without marked changes of the emotional state."

M. Chaslin admits, in his remarks on the diagnosis, that there are mixed forms of this and stuporous melancholia, and there are undoubtedly many cases in which a distinction is practically impossible. Excluding, however, these, which are probably very frequent, there is still a proportion of cases of true melancholia attonita that it seems probable might be hard to distinguish from the confusional dementia, though he does not lay much weight on this fact. However, in any event, whether the views here expressed are fully accepted or not, the book is a valuable contribution to the study of one of the leading problems of psychiatry at the present time.

BOOKS, ETC., RECEIVED.

- Myxædema and the Thyroid Gland.* By JOHN D. GIMLETTE, M. R. C. S. (Eng.), L. R. C. P. (Lond.). London: J. & O. Churchill, 1895.
- A *Text Book on Nursing in Bodily and Mental Diseases, for use in Training Schools for Nurses in Hospitals for the Insane.* Edited and published by R. M. PHELPS, A. M., M.D., Asst. Supt., and SARAH L. PHELPS, M. D., Asst. Physician, Rochester State Hospital. Printed at Rochester, Minn., 1895.
- Some Wards of the State, a Study of the Care of Epileptics.* By C. EUGENE RIGGS, St. Paul, Minn.
- Remarks on the Psychological Treatment of Neurosthenia.* By JAMES J. PUTNAM, M. D., Boston.
- Report of Two Interesting Cases. Word Blindness; Localized Muscular Spasms, Illustrating Cerebral Localization.* By J. M. KENISTON, M. D., Middletown, Conn.
- The Flechsig Method in the Treatment of Insane Epileptics.* By L. PIERCE CLARK, Middletown, Conn.
- The Spastic and Tubercle Types of General Paralysis.* By R. S. STEWART, Bridgend, Glamorganshire.
- Syphilis of the Nervous System.* By W. J. MICKLE, London.
- Hypnotism: Its Uses, Abuses, and Its Medico-Legal Relations.* By WILLIAM LEE HOWARD, M. D., Baltimore, Md.
- Insanity.* By DR. O. EVERTS, Superintendent Cincinnati Sanitarium, etc.
- Suggestions to Hospital Visitors.* By JOHN S. BILLINGS, M. D., and HENRY M. HURD, M. D., with introduction by DR. S. WEIR MITCHELL. Philadelphia: J. B. Lippincott & Co., 1895.
- Arthropathy in General Paresis.* By JAMES HENDRIK LLOYD, A. M., M. D. Reprinted from the Philadelphia Hospital Reports for 1892.

NOTES AND COMMENT.

THE DENVER MEETING.—The fifty-first annual meeting of the American Medico-Psychological Association, which occurred in Denver, June 11–13th, was an earnest, interesting, and profitable gathering. The Brown Palace Hotel proved admirably adapted for the headquarters of the Association, and its provision of an ample room for the daily sessions under the same roof conduced, as always, to prompt attendance and faithful work. A panorama of the Rocky Mountains from Long's Peak to Pike's Peak, which was constantly in view from the windows of the room where the sessions of the Association were held, was stimulating and inspiring. The hospitality of the medical profession of Denver was abundant and gracious and many pleasant friendships were formed during the three days of the meeting. The excursions afterward to Colorado Springs, Manitou, Leadville, and Glenwood Springs were thoroughly enjoyed by those members who had time to take them. All the members of the Association, and the excursionists especially, felt under constant obligations for the careful arrangements made by the chairman, Dr. F. C. Hoyt, and the local committee of arrangements, Doctors Woodson and Thombs, for their comfort and enjoyment, and for the opportunity to visit the wonderful scenery of Colorado under the most favorable circumstances. The chairman of the committee also added much to the comfort and peace of mind of delegates from points east of Chicago, by meeting them at that city and providing special cars and every convenience for the long journey to Denver. The hospitality and resources of our western members seemed boundless, and they were freely bestowed upon the Association. Many valuable papers were read and the discussions were unusually full and exhaustive. The discussion upon dietaries did not elicit the hoped for information as to the best scientific dietary for different classes of patients. It was a matter of great regret that the practical papers of Doctor Munson of Traverse City, and of Doctor Gapen of Kankakee, failed to be presented, owing to the absence of these gentlemen. These would probably have given interesting and full details upon this point. The discussion on the use of thyroid extract brought out many interesting facts as to its use in insanity. The discussion on the relations of pelvic disease to insanity was also full and interesting. The

question of collecting statistics upon the effect of moderate alcoholic indulgence upon the production of insanity, forcibly presented by Doctors Blumer and Bannister's paper and suggestively followed by the remarkable pathological work of Doctor Berkley, with its wonderful micro-photographs of degenerated nerve nuclei and neurodendrites, resulted in the formation of a committee of the Association to coöperate with the American Committee of Fifty. The Committee on Training-Schools presented a brief report, and asked for an extension of time for the completion of its work, as did also the Committee on Statistics. The pathological work, presented by Doctor Meyer of Kankakee, and the alcoholic researches of Doctor Berkley of Baltimore, above referred to, were of exceptional value, and marked a new era in the study of this department of psychological medicine. The admirable presidential address of Doctor Cowles was a dignified and strong presentation of the necessity of medical control in hospitals and institutions for the insane, and a most able vindication of the present mode of organization and administration as against recent criticisms and suggestions of the desirability of radical changes. It was decided to continue the publication of an annual volume of transactions, the volume for 1894 being regarded worthy of becoming a series. The meeting adjourned to meet in Boston on the third Tuesday of June, 1896. The attendance, especially from the West and South, proved a disappointment. No member was present from Minnesota, North Dakota, Nebraska, Kansas, California, Oregon, or Nevada, but a single one from Illinois (Doctor Dewey now lives in Wisconsin), one from Indiana, and one from Michigan. Judging from the Denver meeting, western members, especially those who reside in the far west, prefer to come east to attend meetings rather than to go west. The thinness of the attendance caused Doctor Hill of Iowa to propose an amendment to the constitution that meetings of the Association be held permanently, in future, alternately in Washington and Chicago, which will come up under the rules next year. Meantime this radical change in the methods of the Association should receive careful thought. The program suffered somewhat in consequence of the absence of the members who had promised papers, but could not be present to read them. All things considered, the meeting must be regarded as exceptionally successful and pleasant.

H.

IN ITS EDITORIAL COMMENTS in the report of the British Indian opium commission, in its issue of April 13th, the *British Medical Journal* says, after epitomizing the contents of the report:

“Under these circumstances it is not to be wondered at that the report is against enforcing any radical change in a custom which, in regard to opium eating and drinking, is the growth of centuries, and a perusal of the addendum written by one of the native commissioners makes it clear that an alcohol-drinking people can, but with evil grace, protest against a habit for which there is so much more excuse, and which produces so much less evil results than would follow what many consider the alternative, namely, the spread of alcohol or ganja.”

In its issue of April 27th, editorially noticing the report of the Indian Hemp Drugs Commission, it says: “As in the case of opium, occasional and exceptional harm from excess does not justify deprivation of what, in the vast majority of cases, is an innocuous luxury, and finds that the moderate use of hemp has become a part of the social life of the people.” In view of the above, we wonder whether a report by the Government on alcohol as a boon to the population of Great Britain and her colonies, would cause the *British Medical Journal* to take back its exception as to that agent also. Such a report could be readily enough produced on demand, and might, if need be, be followed by others covering and condoning any possible vice that might be convenient in the interest of revenue. It is a pity, nevertheless, that medical journalism should thus cater to the spirit of unprincipled commercialism.

IN OUR ABSTRACTS AND EXTRACTS in this issue we notice some researches by Doctor Berkley with a new staining method — the phospho-molybdate of silver in free nitrate of silver — which seems to have special advantages in bringing out the details of nervous structure. According to Doctor Berkley this method offers a constancy and fineness of detail before unattainable in pathological preparations. He believes that by its use the lesions of insanity that have heretofore defied detection are in a fair way to be revealed, and that psychiatry will be placed, like neurology, in many of its formerly obscurer phases, on a secure pathological basis.

Of course each new discovery will open up new questions, and behind all are psychological and vital mysteries that may never be revealed, but the prospects of better insight into the material

mechanism of the brain has been greatly brightened by the discoveries of the past few years. We hope that this new method of Doctor Berkley may have as important results as those that followed the investigations of Golgi, Ramon-y-Cajal, Kolliker, and others.

THE MELLAGE TRIAL that was concluded at Aix la Chapelle (Rhenish Prussia) on June 8th last is of unusual importance as indicating the need of reforms in the care of the insane, even where it was perhaps least anticipated, and as demonstrating the inadvisability of allowing it to be under other than medical control. The defendant was sued for libel by the authorities of the Mariaberg Asylum, an institution under the care of ecclesiastics of the Alexian Order, and in his defense he proved that in the asylum they controlled the medical attendance was a farce; there was no resident physician; the two physicians appointed by the brotherhood only spent a short time in the institution, and saw such patients as were brought before them, hardly ever even entering the wards, and when cross-examined by the defendant's counsel they admitted that they had no special knowledge of mental diseases, and had no authority whatever. It was shown further that the patients were subjected to gross abuse, veritable medieval tortures, as the London *Lancet's* correspondent, from whom we take our facts, expressed it. The patients appear to have been ducked, scorched, and pounded — in some cases, it is said, fatally — and illegal detention, which was the charge complained of in the suit for libel, seems to have been proven.

That such conditions can exist in an asylum of 700 patients in a country like Germany is certainly discreditable enough, but even worse things may happen when unscientific laymen (in the medical sense of the term) are allowed to exercise control of asylums or hospitals for the insane.

THE CRAIG EPILEPTIC COLONY will, according to present indications, be open for the reception of patients before the close of the present year. The New York Legislature has appropriated \$125,000 for the institution the current year, and a new board of directors has been appointed. Among these we are glad to see the name of Doctor Peterson, who may be considered as practically the father of the project of the establishing the colony.

THEY DO NOT ALWAYS "DO THESE THINGS BETTER IN FRANCE."
—The *Progrès Médical* of May 18th editorially notices a grievance of friends of patients transferred from the Paris asylums to others in the country, who have no reports sent them as to their conditions, and calls for a law or regulation requiring such reports at least once in three months. The Department of the Seine, which includes Paris, is compelled to send some six thousand of its insane to institutions outside its limits, and the request seems therefore a very reasonable one. In fact the neglect to send information on request, or to reply to inquiries, which is charged, is not at all in accordance with one's general ideas of propriety or of Gallic courtesies.

THE FAILURE of the Governor and the Mayor of New York to approve of the bill providing for the State care of the insane in the New York City institutions is said by the *Medical Record* to be in accordance with the general sentiment of the medical profession of that metropolis. It would seem that the recent developments of State control have not aroused confidence, and that it is preferred to endure present evils to risking others of indefinite but threatening magnitude by the change.

PROBATE JUDGE FERRIS OF CINCINNATI has announced that he will not issue a marriage license where either of the parties to be married is an epileptic. If we could have more judge-made law of this kind applying to certain other incurable diseases, including some venereal affections, it might aid in repressing at least the legitimate production of degenerates, and do away with a large amount of conjugally contracted female disease, which, according to some authorities, is an important element in the production of mental disorders.

THE following is taken from the *Journal of the American Medical Association* of May 4th:

HANDWRITING OF THE INSANE.

PHILADELPHIA, PA., April 18, 1895.

To the Medical Profession: With a view to especially important scientific results, I am studying the handwriting of the insane, and request your aid by way of the loan of documents, letters or written memoranda, or information having bearing upon the subject.

My especial desire is to obtain a given form of letter from ten persons, suffering from different degrees of insanity, such as melancholia, hallucination, paresis, etc., any and all writing that will be of interest in the investigation.

In return for your kindness and help, I will forward to you, free of charge, a full and complete report, together with drawings, diagrams, etc., embracing a full description of my work, which will be of use, help, and value to not only the medical fraternity, but to humanity in general.

Please note on each specimen of writing, the duration of the malady or disorder, together with any miscellaneous information which you feel will be of aid to the purpose in view.

All information sent will be held sacredly confidential.

Very respectfully yours,

RUFUS C. HARTRANFT.

THE RECENTLY ELECTED GOVERNOR OF CALIFORNIA recommends the employment of a woman physician in every State institution where women are confined. This, as far as it applies to well-manned large institutions containing many female inmates, is a good rule, provided that the suitably qualified female physician can be had. To make it apply in cases where there are but two physicians would lead to the embarrassment lately experienced in the undermanned Cook County Insane Hospital, where, in the necessary absence of the male physician, the male patients were neglected.

THE LANCET, March 23, 1895, gives the following under the head of "Parliamentary Intelligence : "

Mr. Kenny has given notice that on an early day he will call attention to the progressive increase in the numbers of the registered insane in all countries, and move "That steps be taken toward the appointment of an international commission to inquire into the subject from an etiological standpoint, and to consider if any and what measures can be taken to arrest the spread of the disease, especially through hereditary transmission and intemperance, admittedly the two principal factors in the causation of insanity."

It is to be very much regretted that the present authorities in Kansas are following the bad precedent set by the late Populist administration of making purely political appointments in the staffs of the State charitable institutions. It is a pity that it seems so impossible for "practical" politicians to acquire any of the higher wisdom in such matters.

PROCEEDINGS OF THE ASSOCIATION OF ASSISTANT PHYSICIANS OF HOSPITALS FOR THE INSANE.

Assistant physicians of insane hospitals have, as a rule, little chance to obtain actual contact with those working outside of their own hospital grounds, in other hospitals. The benefit derived from occasional visits to other hospitals, the instruction and encouragement received by the exchange of opinions with colleagues working under similar conditions, suggested the idea that it would be a great advantage if a number of hospital staffs would unite and form a circle that would have its regular meetings, thus affording the members an opportunity to see many hospitals and to cultivate a spirit of co-operation. So few assistants can join the National Association that a limitation of the membership to physicians from neighboring States seemed opportune, for a beginning at least.

The plan was favored by hearty sympathy of most of the superintendents, and the first meeting was agreed upon to take place in Kankakee. Necessarily, the framing of a constitution occupied time that will in the future be given to more useful topics. Nevertheless, the prospects of the association seem to be based on a start that is encouraging and promises rapid growth.

The first meeting of the above association was held May 2 and 3, 1893, at the Illinois Eastern Hospital for the Insane at Kankakee.

The following physicians were present during the session: George Boody, M. D., Kankakee, Ill.; Coleman B. Buford, M. D., Kankakee, Ill.; Isabel M. Davenport, M. D., Kankakee, Ill.; John C. Doolittle, M. D., Independence, Iowa; H. J. Gahagan, M. D., Elgin, Ill.; H. J. Kennedy, M. D., Kankakee, Ill.; Adölf Meyer, M. D., Kankakee, Ill.; R. H. Moffit, M. D., Mount Pleasant, Iowa; Jason Morse, M. D., Pontiac, Mich.; J. H. Neff, M. D., Kalamazoo, Mich.; Herman Ostrander, M. D., Kalamazoo, Mich.; A. S. Rawley, M. D., Traverse City, Mich.; W. G. Stearns, M. D., Kankakee, Ill.; A. L. Warner, M. D., Kankakee, Ill.; Emily Wells, M. D., Kankakee, Ill.; Jacob F. Wells, M. D., Independence, Iowa.

The association was called to order at 4 P. M., May 2, 1895, by Doctor Warner. Doctor Warner was elected temporary president; Doctor Meyer, temporary secretary.

After a few words of welcome by Doctor Warner an outline of the constitution and by-laws was submitted by Doctor Meyer.

After a short discussion of the propositions the matter was referred to a committee, consisting of Doctor Rawley, Doctor Doolittle, and Doctor Meyer, to report at the next session.

The motion to adjourn was seconded and carried.

The association was called to order by Doctor Warner, on May 3, 1895, 8.00 A. M.

Doctor Rawley reported on the articles of the constitution and by-laws, which were discussed and adopted, as follows:

Constitution and by-laws of the association of assistant physicians of hospitals for the insane:

Article 1. This association shall be known as the Association of Assistant Physicians of Hospitals for the Insane.

Art. 2. The object of this association shall be the promotion of fellowship and mutual advancement.

Art. 3. Any assistant physician or assistant superintendent shall be eligible to active membership.

Art. 4. The officers of this association shall consist of the President, Vice-President, Secretary, and Treasurer, and these, together with two other members, shall constitute the Executive Committee.

BY-LAWS.

Section 1. The officers of this association shall be elected annually, with the exception of the President, who shall preside for one meeting only, and who shall be appointed in accordance with Section 2.

Sec. 2. Meetings of this association shall be held at the different institutions, according to the direction of the Executive Committee, and the President of each meeting shall be a representative of the institution wherein the meeting is held, and shall be chosen by the local members.

Sec. 3. Any physician eligible for membership in this association may become a member by a majority vote of members present at any regular meeting.

Sec. 4. It shall be the duty of the Executive Committee to direct the preparations of the programs, select place of meeting, fix dates, etc.

Sec. 5. It shall be the duty of the President to preside at the meeting for which he was appointed, and he shall remain in office till his successor has been appointed.

The Vice-President shall act in the absence of the President.

The Secretary and Treasurer shall keep a careful record of the minutes of the meetings, preserve all papers, attend to correspondence, receive and disburse all moneys and account for the same at each meeting.

Sec. 6. The charter members of this association shall be limited to the staffs represented at the initial meeting.

Sec. 7. There shall be at least two regular meetings of the association a year. The annual meeting shall be held in May.

Sec. 8. This constitution and by-laws may be amended by a two-thirds vote of the members present at any regular meeting.

After the adoption of the by-laws the following officers were elected: President, Dr. A. L. Warner; Vice-President, Doctor Doolittle; Secretary and Treasurer, Dr. A. Meyer; members of the Executive Committee, Doctor Morse and Doctor Gahagan.

Doctor Neff extended an invitation of Doctor Edwards of Kalamazoo to the association for a meeting in the fall of this year.

Doctor Kennedy moved, and the motion was seconded and unanimously carried, that the invitation of Doctor Edwards should be accepted and answered by a vote of thanks.

The meeting adjourned till 2.00 P. M.

Dr. Clarke Gapen, superintendent of the Illinois Eastern Hospital at Kankakee, gave an address of welcome to the new association. There are two points in which such a union can do much good. Every asylum officer is apt to become encysted in his daily routine, and to lose the spirit of enterprise kept up in outside practice by competition. The torpor in these two respects can best be overcome by the cultivation of a broad conception of the duties of a physician. He may become engrossed in his special work and special duty, and forget the general interests of the hospital; and he may become diverted toward the medical work generally. Both aberrations are equally incompatible with the ideal aspirations in the life in a hospital for the insane, the aim of which should be the formation of a model household. The other danger, the weakening of the spirit of enterprise, is just as baneful. There is no such a thing as standstill; lack of progress means retrogression. A man may do his duty conscientiously from day to day, but if he fails to have enterprise to do something beyond the ordinary routine, he is not the right man in the right place. The association should bear this in mind and cultivate this spirit, and facilitate the exchange of suggestions and the communication of valuable observations.

Doctor Warner extended the thanks of the association to Doctor Gapen for the warm welcome and for the useful and encouraging suggestions.

Doctor Warner's paper on the history and present arrangement of the Kankakee Hospital for the Insane was withdrawn on account of limitation of time.

Doctor Meyer offered a few demonstrations:

1. Tissues hardened in formalin. The preparation put on the market is used in a 3-5 per cent solution, as a fixative and hardening reagent. The stronger solutions (10 per cent and more) harden better and more rapidly, but for a preserving fluid the lower concentrations are preferable. The advantage of formalin is best shown in transparent tissues (cornea, cysts) and wherever colors are to be preserved that would be destroyed by Müller's fluid or extracted by alcohol. The results with the nervous system are very satisfactory, the relations of gray and white matter remaining very distinct. One noteworthy feature is that the vapors alone are excellent preservers, so that, if the specimen should happen to be incompletely immersed, it would nevertheless keep very satisfactorily if it is kept from drying out. Such an accident would prove fatal with most other methods.

Among the formalin specimens presented, there were a few of special interest. They came from a man who had died of general melanosis. The patient, forty-four years old, had been failing the last four weeks of his life, and was found with a small, dark hemorrhagic tumor of the back, starting from a naevus. The patient showed a remarkable discoloration of the skin and even of the conjunctiva, a color similar to that produced by prolonged use of nitrate of silver, but more of the character of slate color. At the same time he was found to have a much enlarged liver and spleen; the margin of the liver reached nearly the umbilicus and was distinctly uneven.

The specimens obtained in the autopsy and preserved in the weak formalin solution have preserved their original discoloration very well. The heart with its numerous small foci of melanosis and its dif-

fuse gray stain, and the liver with the slate-colored liver substance and the dark tumors demonstrate the advantages of formalin as a preserving and as a hardening fluid. The case will be published elsewhere.

For histological purposes the fixation is best obtained with more concentrated solutions. There is hardly enough experience available now to decide on its value in this direction.

2. Demonstration of two brains with extensive resorption of brain-substance and very marked secondary degenerations. The specimens will be described in a later number of this journal.

Doctor Boody reported on thirty-six cases of epilepsy that had been treated in Kankakee with Flechsig's opium-bromide treatment. The results will be reported elsewhere in this journal, including the experience of Doctor Davenport and Doctor Stearns.

Doctor Warner insisted on the necessity of changing the medication frequently in epilepsy in order to obtain lasting improvement.

Doctor Rawley mentioned a case of epilepsy that had apparently come on in consequence of the use of opium. When the patient was received in Traverse City and the opium habit was stopped the epilepsy disappeared too.

Doctor Buford gave an illustration of how irregular the course of the disease is at times, and of the difficulty in judging of so-called recoveries. A patient was received some time ago who was said to have about fifteen fits a day while at home; after the admission he did not have a single seizure.

Doctor Buford presented the restraint-blanket devised by Doctor Delia Howe, and now made in several forms.

Doctor Ostrander moved that a vote of thanks be extended to the officers of the Kankakee Hospital for the hospitality and the pains taken to give in so short a time a review of the arrangement of the hospital and the methods of work.

The motion was seconded and carried.

The association adjourned, leaving to the committee the arrangements for the next meeting.

The time between the sessions was conscientiously used for an inspection of the various departments of the hospital. In the evening of May 2d, after an excursion on the Kankakee River, Doctor Gapen and Mrs. Gapen had the kindness to give a reception to the members of the association and the officers of the hospital.

CORRESPONDENCE.

The following letter is a valuable contribution to the literature of political plunder in public institutions:

TOPEKA, KAN., STATE INSANE ASYLUM, June 10, 1895.

HENRY M. HURD, M. D., *Secretary American Medico-Psychological Association.*

MY DEAR DOCTOR: It is with grievous disappointment that I find myself obliged to inform my brethren of the society that I am unable to be with them at this meeting. Up to a late date I hoped that events would so shape themselves that I could get away, but the chaotic condition of asylum affairs prevents.

The history of this institution for the last year or two is a striking object lesson touching the un wisdom of political management of public institutions, or rather, I should say, political mismanagement.

Soon after the late Populistic wave which swept over Kansas placed the control of the public institutions in the hands of a new political party, the trustees proceeded to the election of "officers" of the Topeka Asylum. The statutory officers comprise the superintendent, assistant superintendent, steward, and matron. To the surprise and consternation of the old members then remaining on the board, and of myself as well, the controlling element in this board, in formal session, elected the seamstress, teamster, baker, supervisors, housekeepers, etc., no one of whom had ever had any asylum experience, many of whom were totally unfitted by natural bent, habits, and previous occupations for their duties, and whose claims to recognition were that they had contributed to campaign expenses, or fried doughnuts during the "State-House War." When some of these new appointees came to the asylum to report I was so impressed with their unfitness, and with the difficulties and dangers of the situation, that I wrote my resignation, and would have presented it to the board had it not been that a valued friend, a former member of the board of trustees, happened to spend the night with me and persuaded me not to resign, but stay and do my best to keep the institution in good order. After a few months' observation of asylum work and much trouble in other institutions (our board has control of eight charitable institutions), the trustees were personally in favor of retaining me in charge of

the asylum, but party clamor insisted that the institutions should be cleared of Republicans "from garret to cellar," and all the remaining Republican officers and employes were "let out" and their places filled from the dominant political party.

Within six hours after my leaving the asylum insubordination began, and within thirty days pandemonium was outdone. Ere long the matron and superintendent would not speak to each other, the clerk and the superintendent came to blows, the engineer and clerk were at war, the bookkeeper ignored the steward; some of the board remained continually at the asylum and incited insubordination against the superintendent they had been anxious to elect; the members of the board quarreled among themselves; the female assistant superintendent brought suit against the superintendent for assault and battery; the matron brought suit against him for slander; the superintendent brought suit against the assistant superintendent and matron and two of the trustees for conspiracy, and the assistant superintendent and matron obtained an injunction against the board to prevent the acceptance of resignations said to have been obtained by fraud.

This state of affairs led persons of prominence in the controlling political party, for the purpose of restoring good order and efficient administration, to beseech me to take legal steps to compel the board to reinstate me in the office from which the lawyers claimed I had been illegally removed. After much urging I consented to this. Before a decision was reached, however, the condition of affairs at the asylum had become so serious that the trustees who had removed me from the superintendency secured the resignation of the then superintendent and reelected me, and I returned to the asylum, after an absence of 9½ months. By formal vote the board put the whole control of the institution in my hands, and I began the task of reconstruction. It will take a long time and much hard work to get the institution into a satisfactory condition, but with a return of old officers and employes, and a weeding out of inefficient and insubordinate ones, steady progress is being made in this direction.

As a result of the quarrels among the asylum officers the retiring superintendent engineered the filing of charges against some of the remaining officers, which resulted in the suspension by the Governor, three months ago, of the assistant superintendent, steward, and matron, and I am still without the two former officers.

This political administration has cost the State a deficiency appropriation of \$11,000, besides \$5,000 or \$6,000 investigation expenses.

I had anticipated much pleasure and profit from the meeting at Denver, but being short one medical officer, and having no one competent to assume control of the institution, for even a few days, together with the fact that I am acting steward, renders it impossible for me to meet with you.

I extend my congratulations to all who are able to be present at this meeting, and hoping I shall be enabled to meet with you next year, I remain most cordially and fraternally your fellow-worker in the field of practical psychiatry.

B. D. EASTMAN.

THE HALF-YEARLY SUMMARY.

The notes of the present SUMMARY, though somewhat less abundant than usual, tell the characteristic story of hospital progress of which THE SUMMARY has been the exponent during a term of years. The advances in methods continue without reference to outside criticism and unjust and unfriendly comment breathing the animus of personal motive. Its pages have recorded from year to year the achievements and aspirations of its clients, and its facts are the facts of history, not to be controverted or undone by spasmodic and pretended reform. With the accomplishment of State care in sight, its earlier issues revealed the struggles for classification, in which the disposition of feeble terminal cases in the airy and clean infirmaries throughout the land solved a problem before its recognition by the profession or public outside. Closely followed the movement for the medical treatment of recent curable cases, spontaneously and simultaneously in both the great English-speaking associations. THE SUMMARY of the last two years deals with this burning question almost to the exclusion of others, again to the credit of the hospital. Through its pages we look in vain for the reformers, politicians, commissioners, general practitioners, and specialists in other departments. Too widely diffused are knowledge and experience for repetition of the revolution of a century ago. THE SUMMARY fears the struggles for notoriety upon the possible shortcomings of others, by manifestoes and portraits in the public press, are to pass quickly into oblivion. As Oloffe, the dreamer, from his high vantage point of vision, gazed upon the towers and turrets, spires and rich ornamental gables of the New York that was to be, rising through the far-floating smoke of the lighted dream-pipe, so THE SUMMARY, glancing into the future, not so great a distance, beyond the ruins of county houses, jails, basement dungeons, and chains, past the magnificent architectural pile, into the ideal hospital, its cottages, garden, and laboratories, finds no sainted martyrs of reform, but the same portraits of Pinel and Tuke, revered and sacred, and sharing none of their honors with a third.

Secure in history and in the future, the hospital deserves and will command public confidence, even more in the coming years than in the past.

DISTRICT OF COLUMBIA.—*Government Hospital for the Insane*.—During the year ending June 30, 1894, 115 *post mortem* examinations were made. The special report of the pathologist, Doctor Blackburn, comprehended a study of ten cases of intra-cranial tumor, including one case of aneurism of the middle cerebral artery, from which the following conclusions were deduced:

Six of the nine true tumors probably originated from the dura mater, and were all classed as sarcomata, possibly endothelial sarcomata. Spindle cells were the predominant element in all but one. A greater or less tendency to the formation of "cell nests" was observed in all; in fact, this feature is characteristic of the endotheliomata of the dura mater especially. Removal would have been possible in four of the cases at least, though an operation was not indicated by the symptoms in three of these. Two were gliosarcomata, situated in the central portions of the temporal lobes, and could not have been removed with safety. The brains revealed degenerative changes in the nerve cells and various vascular alterations. In one case three primary tumors existed, endothelial sarcoma of dura mater, adenoid cancer of stomach, and round-celled sarcoma of testicle, with metastasis to the kidneys and abdominal lymphatic glands; another case showed a cerebral aneurism, an enormous pleural cyst, and an abdominal aneurism which ruptured into the bowel and caused death; in another uterine myomata co-existed with tumor of the pituitary body.

INDIANA.—Dr. Jos. G. Rogers, medical superintendent of the Northern Indiana Hospital for Insane, at Logansport, furnishes the gratifying intelligence that an eleemosynary millennium has been achieved in Indiana.

By a recent act of the General Assembly, for the better government of benevolent institutions, the Governor has been directed to appoint new boards for the six institutions, composed of members taken equally from the principal political parties, whose terms of service and reappointment shall be arranged so that an experienced majority shall always be upon each board; but, still more important, it is recited in Section 7 of the Act that "said Boards of Control shall, in the employment of superintendents, and confirmation of assistants and other employes, take into consideration only the qualifications and fitness of the persons selected to fill such places, and no person shall be selected or employed to fill any of such positions on account of his political belief, or affiliations, and no superintendent, assistant or employe shall be dismissed from service on account of his political belief, faith or affiliations, and in the employ of such superintendent, assistant or employe, the qualifications, character, merit, and fitness shall be the only matters to be considered by such Board of Control in the selection or retention of such employes."

It is believed that Indiana is the first State in the Union to lay down definitely in its statute law a clear and explicit recognition of the important principle embodied in the above. It is hoped that other States may speedily follow its example. Such a statute once established, will remain as a rock, for the people will defend it against any encroachment from any party or political clique. Indiana is certainly to be congratulated.

— *Central Indiana Hospital for the Insane, Indianapolis.*— Plans have been matured and perfected for the reconstruction and reorganization of the pathological department. It will be placed on such a footing as to meet the requirements of the most exacting pathological investigation. Its accessories will be of such character as will satisfy any demand for necessary laboratory work. In addition to the employment of a competent pathologist it is proposed to organize a society for the prosecution of the work. All members of the profession interested in this department will be entitled to participate in its meetings. Abstracts from the papers presented and a synopsis of the proceedings will be furnished the medical journals.

Considerable time and thought have been given to the perfection of a plan for the organization of a training school. A graded course of instruction will be presented by a competent corps of professional men, including the physicians of the institution. Attendance upon the lectures and recitations will be obligatory.

It is proposed to provide hospital wards for the sick of each department, and a pavilion for contagious diseases is urged.

— *Eastern Indiana Hospital for the Insane, Richmond.*— Pressure for accommodation is proposed to be met by the construction of additional buildings, to provide 200 beds, at an aggregate cost of \$100,000. The essential features of the cottage system are contemplated in the plan.

— *Southern Indiana Hospital for the Insane, Evansville.*— A training school was organized in October, 1893, and has since continued in successful operation. Attendance is compulsory. The curriculum includes hygiene, sanitation, ventilation, general principles of nursing, special nursing in fevers, bandaging, surgical dressings, dietetics, housekeeping, lectures in anatomy, physiology, materia medica, surgery, surgical emergencies, and insanity.

A lecture course for attendants has also been organized, in which ladies and gentlemen of the city participate. The lectures are upon general topics.

IOWA.— *Iowa Hospital for the Insane, Independence.*— In April a detached building, which accommodates 100 female patients, was opened. Two other detached buildings are each occupied by more than 100 male patients. The two lower floors in the wings of the main institution are occupied by recent and promising patients. No chronic cases whose presence or influence is detrimental are permitted to remain as occupants of these two lower floors. The classification of patients in this institution is better than ever before. The present normal capacity of this institution is 950 patients. The primary object of the institution, the restoration of those who are sent for treatment, is constantly in mind; crowding above the normal capacity is not permitted.

Clarinda.— The new building for violent patients (capacity, 75) and the infirmary (capacity, 50) are nearly completed, as are also the new water tower, 100 feet high, cost \$40,000, and the new industrial building, containing shops for broom and brush making, tailoring, shoemaking, together with the sewing-rooms and accommodations for power machinery and electric and ventilating plant for main building. The dimensions of

this building are 70 x 40 feet, three stories high. There have also been made extensive improvements in the grounds. The total capacity of the institution is now 600. The water supply from drive-wells is ample.

—*Independence*.—Dr. C. F. Applegate, formerly of Indianapolis and Ward's Island, N. Y., has been appointed third assistant physician.

—*Mount Pleasant*.—Dr. R. H. Moffatt has been appointed third assistant physician, and Dr. F. O. Jackman, late of Topeka, fourth assistant and pathologist. The industrial building for men, 50 by 75 feet, two stories high, and a fine horse and carriage barn have been completed.

—*S. W. Iowa Hospital for the Insane, Cherokee*.—The commissioners appointed by the Governor, the three superintendents of the existing hospitals, and three others have settled upon plans for a first pavilion for eighty patients, three stories high. The superintendents on the board preferred a two-story plan, but this was not favored by the others. Three hundred acres have been purchased for \$12,000, with an option on 240 acres more. Fifty thousand dollars per annum has been appropriated for the years 1896-7-8-9.

KANSAS.—*Kansas State Asylum, Topeka*.—Every energy has been bent to the restoration of the *morale* of the institution, so ruthlessly shattered by the authorities lately in control. General disorder, derangement, and confusion were wrought in the few short months of political mismanagement.

MARYLAND.—The report of the Lunacy Commission for the year 1894 shows that there were in the different institutions for the insane, including alms-houses, 3,124; of this number 385 were colored. The speedy erection of the additional hospital for the indigent insane is anticipated.

—*The Sheppard Asylum*.—The new east building has been occupied for several months and now contains thirty-five patients. The extra room secured allows much more freedom and comfort, and more extended classification.

The operations of the hospital for the past half-year have been thoroughly satisfactory. There have been twenty-nine admissions, nine discharged recovered, or 31 per cent of the number of admissions, six discharged much improved, and seven as improved. Of the twenty-nine admissions eight came voluntarily for treatment, three of whom exhibited considerable mental disturbance, but were able to fully appreciate the danger of their condition and the necessity for immediate treatment. The wisdom of a law which allows a person with incipient mental trouble to place himself under proper care is seen more and more as experience with it widens. Many voluntary patients who were tided over their critical prodromes, and were undoubtedly saved the later stages of mania or melancholia, would never have consented to a legal commitment. The law is considered a most excellent one, and voluntary application advised for patients who are able to take advantage of its liberality.

MASSACHUSETTS.—*Danvers Lunatic Hospital, Danvers*.—During the year thirty-five lectures to the training classes were given by members of the medical staff and others. Weekly recitations from the standard text-books no nursing have been required. Practical instruction has been given in the use of the clinical thermometer, the hypodermic syringe, the sterilizing process

for instruments, gauze and other dressings, the preparation of beds for the sick, and the various forms of baths. The apothecary of the hospital has given instruction in the drug-room respecting common medical remedies and common poisons, their antidotes, etc. Graduates and senior-class pupils have taught the juniors to apply bandages to all parts of the body. Since the training-school was established measures calculated to lighten the labors of the pupils in the wards have been adopted from time to time. Increased compensation has been given to pupils and graduates, but the supply of candidates is insufficient.

A special house for pupils is needed. In such building, arranged to pleasantly accommodate the training-school pupils at night, and while off duty in the day-time, the nurses would find a more complete respite, at short intervals, from the nervous strain which can not be wholly relaxed while in the patients' wards.

— *Hospital for Dipsomaniacs and Inebriates, Foxborough.*— The services of a skilled teacher in gymnastics have been secured and provision made for the exercise of the patients in classes for physical culture. At the outset only free movements were attempted, later chest weights were added; also the out-of-door games of medicine ball and basket ball. It is now proposed to add to the variety of the exercises by the use of wands, dumb-bells, and horizontal bars. As an essential part of the exercise each class at its close is required to take a spray bath at a regulated temperature. That the physical culture is of positive benefit in the renovation of the diseased tissue is manifest in the cases of many who persist. There is evident brightening of facial expression, increased promptness in the working of the mind, greater elasticity of movement, with increased capacity for and interest in work.

— *Westborough Insane Hospital, Westborough.*— Orificial surgery has been tried in thirty cases where there seemed hope that the mental state might improve after relief of the diseased physical conditions. The results were not brilliant, but seventeen of the thirty were more or less benefited, and of these, four were discharged, one recovered, another apparently well, but not so discharged, and two others so much benefited that they could be cared for at home and enjoy home life. Appended to the annual report of the hospital is a tabulated summary by Doctor Mann, assistant physician, of 200 urinalyses.

MICHIGAN.— *Michigan Asylum for the Insane, Kalamazoo.*— The Legislature of 1895 appropriated \$30,000, which will be available within the next year and a half, to construct a cottage or secondary infirmary for 100 male patients. There are so many aged people, paralyzed and sick patients sent to the asylum, that more infirmary space is urgently required. Plans are not yet completed for this cottage, but it is proposed to build it largely on the dormitory plan and to provide for the special care and nursing of the classes above indicated.

It is pleasing to write that the total yearly amount allowed for officers' salaries was increased by the recent Legislature, thus permitting a much needed addition to the medical staff. An interne will soon be appointed in each department. The trustees are also enabled to increase the salaries of the

junior physicians, and thus prevent their accepting appointments in other institutions where larger salaries are paid.

The general asylum laws have been otherwise somewhat modified. Urgent private cases may now be admitted to the asylums in this State on the certificates of two physicians and detained fourteen days, awaiting the issuing of the proper order of commitment from the judge of probate. A bond in proper form, guaranteeing the payment of the expenses of private patients, is also, by this recent act, required as a part of the papers necessary for admission.

The Legislature has enacted a law permitting the Governor and Board of State Auditors to proceed at once with the reconstruction of any asylum or other State building destroyed by fire or otherwise, without convening in special session. Not more than \$100,000, however, shall be expended for this purpose between the sessions of the Legislature, which are biennial.

The trustees of the asylum have authorized the superintendent to employ a dentist. Dr. A. D. Weakley, who formerly served in like capacity in the Government Hospital at Washington and is now a practicing dentist in Kalamazoo, spends one day of each week at the asylum. A dentist's chair and other necessary appliances have been procured and a neat office fitted up. All the patients on a given ward are taken in turn and their teeth examined, the necessary extracting and filling done. Patients who have means to do so will be expected to pay for the necessary attention, but indigent patients are treated at the general expense of the asylum.

By recent order of the board of trustees all male attendants will be required to be uniformed after the 15th day of October. A dark gray cloth has been adopted and the suits are now being made in the asylum tailor shop. Female attendants have worn a uniform for several years past.

Additional water mains and hydrants are being placed around the female department and the entire system connected to the tank of the newly-constructed water-tower. The bottom of this tank is 102 feet from the grade, and it holds 250,000 gallons of water. The tank is to be inclosed by a drum made from hollow building tiles and to be surmounted by an ornamental roof. The whole structure will be a very conspicuous feature of the asylum building.

— *Eastern Michigan Asylum, Pontiac.*— A class of nineteen members graduated from the training school of the Eastern Michigan Asylum March 27, 1895. The diplomas were given by the Hon. W. I. Vinton, president of the Board of Trustees, and addresses were delivered by Hon. W. W. Stickney, trustee, and Dr. C. B. Burr, formerly superintendent of the asylum, and now of Oak Grove, Flint. All of these graduates, with two exceptions, are still in the service of the institution. The present class numbers more than forty and is taking great interest in the work of the school.

— *Oak Grove, Flint.*— Dr. James F. Noyes, one of the projectors and original stockholders of Oak Grove, has donated his stock to the hospital to be used in the erection of an amusement hall for patients. The Noyes Hall, as the building will be called, will make a most important addition to the equipment of the hospital.

MINNESOTA.—The meeting of the Section of Nervous Diseases of the Minnesota State Medical Society was devoted to the consideration of insanity. The following papers were presented:

“The Ideal Hospital for the Insane,” by Dr. R. M. Phelps, Rochester; “Modern Treatment of the Insane,” by Dr. C. E. Riggs, St. Paul; “Clinical Study of the Individual Insane,” by Dr. H. A. Tomlinson, St. Peter; “Development of the Insane Asylum,” by Dr. Helen Bissell, St. Paul.

Great interest was shown in the papers and discussion. A resolution was introduced that it was the sense of the society that the new hospital under consideration should be situated directly adjacent to the large cities, so as to be more economical for the coming and going of patients and visitors, and available for instruction to students and general practitioners.

—*Rochester State Hospital, Rochester.*—During the year there has been under way the rebuilding of the center to a fireproof construction and to what was thought to be a more fitting and more expensive building. The appropriation for the rebuilding was \$60,000. Building should have been done January 1st, but on account of many delays is but just being completed.

NEW HAMPSHIRE.—*New Hampshire Asylum, Concord.*—During the past year the numbers at this institution have largely increased. There is now an average of over 400 patients. The institution has a capacity for 350.

An attempt was made during the last Legislature to procure an appropriation for additional buildings for the chronic insane, but the attempt was not successful.

The new building for convalescent male patients is just nearing completion. It will have a capacity for twenty-five patients. It will be occupied probably by the first of September.

The sixth class in the training school graduated in June. The class numbered ten. About half of the graduates remain in the institution, the remainder going into general nursing outside of the institution.

NEW YORK.—The law appropriating money for the support of the insane, passed by the Legislature of 1895, is as follows:

SECTION 1. There shall be imposed for the fiscal year beginning on the 1st day of October, 1895, a tax of 1 mill on each dollar of real and personal property of the State, to be assessed, levied, and collected by the annual assessment and collection of taxes of that year, and paid by the several county treasurers into the treasury of this State to be held by the treasurer for the following purposes: For the State Commission in Lunacy; for the maintenance of the State hospitals, including the payment of officers' salaries and employes' wages, which salaries and wages shall be uniform for similar grades of officers and employes in all the State hospitals, and which shall be classified and determined by the State Commission in Lunacy, subject to the approval in writing of the Governor, Comptroller, and Secretary of State; for the purchase of such supplies as may be required for the proper care and treatment of patients, including medicines, medical and surgical appliances, clothing, food, fuel, and lights, and for the general maintenance of patients, but contracts subject to the approval of the commission shall be entered into by representatives of the managers of the State hospitals jointly for such

principal articles of supply as it may be found by the commission to be feasible to purchase; provided, however, that the food supplies allowed to officers and employes shall be drawn from the ordinary supplies provided for the general use of the hospitals; and provided, further, that no expenditure shall be made from the contingent fund provided by section three of chapter 214 of the laws of 1893, except in case of actual emergency requiring immediate action and which can not be deferred without incurring loss or danger to the State hospitals or the inmates thereof; for repairs, renewals, betterments of buildings, equipments, fixtures, furniture, and stock; also for such additional accommodations in State hospitals in actual operation as may be needed to provide for the annual increase in the number of dependent insane in the State hospitals during the fiscal year ending September 30, 1896; but no patient shall be permitted to occupy more than one room in any ward or building used or occupied by patients of the State hospitals, nor shall any patient, his friends, or relatives, be permitted to pay a greater sum than \$10 per week for his care and treatment in any of the State hospitals; for printing blank forms which shall be uniform in all of the State hospitals, and for binding and stationery, all of which shall be furnished under forms approved by the commission, under and by virtue of contracts entered into by the State for printing and binding; for such additional services and other incidental expenses as may be necessary to effectually secure reimbursement from relatives who may be liable for the support of patients or from their friends who may be willing to assume the cost of support of such patients; for the removal of non-resident or alien lunatics who may be inmates of State hospitals, or otherwise, who are not properly chargeable to the State; for pathological research and for necessary expenses in establishing and maintaining a pathological laboratory for the benefit of the State hospitals, including the Matteawan State Hospital for Insane Criminals; for transportation of patients from their homes or elsewhere to State hospitals. The sum of \$4,200,000, being on account of the tax to be levied by this act, is hereby appropriated for the foregoing purposes, to be expended under the provisions of chapter 126 of the laws of 1890, chapter 214 of the laws of 1893, and chapter 358 of the laws of 1894, so far as such last-named chapter relates to the State hospitals for the insane. Of the sum hereby appropriated no money shall be paid out except under the provisions of the said acts. Such sum or sums as may be necessary to provide for additional accommodations for the insane and for other necessary buildings, repairs, and improvements, not to exceed the sum of \$500,000, shall be advanced by the treasurer on the warrant of the comptroller in anticipation of the collection of the tax above described and be immediately available for such purposes.

—The State Senate appointed a sub-committee at its last session to investigate the State Commission in Lunacy. This report has been published by the State Commission in Lunacy. The report, after presenting data obtained from the office of the commission sustaining its record for economy, and giving in detail the emoluments of its members, sums up as follows:

“The scope and magnitude of the service rendered by the commission in supervising so many institutions for the insane, tenanted by so large a number of persons drawn from every walk of life and presenting so many phases of

mental disturbance, and in guiding and guarding so large an outlay for their care and treatment, is obviously no small task; it calls for the exercise of high qualities and of conscientious devotion to the State's best interests in both a humane and a material sense. The committee has been pleased to find evidence warranting the conclusion that the commission is animated by a proper spirit of zeal and earnestness in its work, and is bringing to it intelligence, energy, courage, and good judgment in a degree worthy of this public commendation."

The committee, after a "cursory resumé" of the testimony relating to the commission, includes in the report the results of an investigation of the State hospitals through the office of the commission, and without testimony of the officers of the institutions. The history of lunacy legislation in New York is reviewed and the following conclusion is reached:

"In the one feature of asylum management which especially concerns the Legislature, and which comes most directly into line with the scope and purpose of the resolution under which your committee is acting, to wit: The purchase of supplies and the expenditure of State moneys upon repairs, alterations, improvements in grounds or buildings, additions to the plant, etc., it ought to be said that great looseness of method and almost complete freedom from check or restraint naturally invited, and often did produce, wasteful and extravagant, if not useless, outlay. The effect of this unfortunate system of local control, with no efficient State supervision and no effectual audit of vouchers for annual expenditures of hundreds of thousands of dollars of State money, was most obnoxious to sound public policy, and had been disastrous in real results, practically throwing away large sums upon objects of little or no utility, and continually wasting at manifold small leaks, which proper vigilance would have stopped. The enactment of the law of 1893, which applies business principles to the business of feeding, clothing, and caring for the State's insane, has worked a revolution in this particular, and the large saving affected under it in a single year amply demonstrates its value and efficacy as a measure of genuine reform."

The committee recommends substantially the abolition of local boards of managers and the appointment of visitors. The salaries and emoluments of hospital officers excited greatest protest, which forms the body of the report. The several details of the living of medical officers are made up in a number of tables, and present a formidable showing, by separate estimates of the cost of minor articles of living. Thus \$1 *per day* for the table supplies for each member of the family, including nursing children, laundry service at commercial rates, house rent at \$2,000 *per annum*, etc., sums up the living expenses of superintendents at \$5,000. It is furthermore stated that this detailed showing does not include "the free and unrestricted use of postage, stationery, daily newspapers, and various periodicals, such as magazines, medical books and journals, the use of telephone, unlimited laundry facilities, use of greenhouses, etc., and other things of convenience incidental to the machinery of a great hospital, nor the use of bands of music furnished by the State for entertainments, nor the free use of medicines and medical supplies."

—*Buffalo State Hospital, Buffalo.*—The graduating exercises of the ninth

class of the training-school were held May 31st. Twelve nurses received certificates.

— *Binghamton State Hospital, Binghamton.*—The cold-storage building and general storehouse has been completed, and the refrigerating plant has been installed by the Hercules Ice Machine Company of Chicago. This plant is now in operation, and affords the best possible facilities for preserving meats, butter, eggs, and other perishable supplies. The general storehouse affords greatly improved accommodations for supplies of all kinds.

A telephone system with a central-office exchange has been installed, by means of which connection is secured with nearly all of the more important buildings on the premises.

Under chapter 693 of the laws of 1895 the hospital has been allowed, by the State Commission in Lunacy, funds for the erection of an entertainment building, a mortuary, renewal of the plumbing in the main building, finishing the apartments for employes in the bakery building, sidewalks, furniture, completion of the coal trestle, finishing of the greenhouse, a steam road-roller, and for ordinary repairs the sum of \$62,150.

— *St. Lawrence State Hospital, Ogdensburg.*—The announcement and calendar for the season of 1895-96 of the Training School for Nurses has recently been issued. Members of the medical staff and local practicing physicians constitute the corps of lecturers and instructors, with special ward instructors from the graduates of the school. The text-books in use include:

Junior Year: "Manual for Hospital Nurses," Domville; "Physiology and Hygiene," Hutchinson; "A Text-Book of Nursing," Weeks-Shaw; "Accidental Injuries," Cantlie; "Notes on Fever Nursing," Allan.

Senior Year: "Physiology and Hygiene," Hutchinson; "A Text-Book of Nursing," Weeks-Shaw; "A Manual of Childbed Nursing," Jewett; "Notes on Surgery for Nurses," Bell; "Massage and Swedish Movements," Ostrom; "Hand-Book for the Instruction of Attendants upon the Insane," British Medico-Psychological Association.

The course covers eight months of thorough theoretical and practical instruction in nursing, massage, cooking, and everything relating to the care of the insane, full details of which are given in the calendar.

— *State Institution for Feeble-Minded Children, Syracuse.*—The annual report of the superintendent refers as follows to the estimate system: "By chapter 654, laws of 1894, this one, in connection with other State charitable institutions, is required to submit estimates in detail, both as to quantity and price of all purchases contemplated, on or before the fifteenth day of each month for the next succeeding month to the State Comptroller, for his revision and approval. It would be premature at this time to make either comments upon this law or predictions of its probable results. It is plain thus early to see, however, that its operation will oftentimes prove inconvenient, and that it will impose a vast amount of additional duties, largely of a clerical nature, upon the steward, clerk, matron, treasurer, superintendent, and others in the institution service. The office room of the steward and clerk is small, and was outgrown several years ago. To carry out the requirements of the estimate law with convenience and facility, more office room is

greatly needed. I would, therefore, recommend that an appropriation be requested of the next Legislature to erect a small building upon the grounds, adjacent to the main building, for office purposes, and in connection therewith a fireproof vault should be constructed where books and records may be kept with safety in the event of fire."

— *Willard State Hospital*.— Since the beginning of the year, the old chapel has been converted into sleeping-rooms for thirty female nurses and a commodious sitting-room for their use, furnishing pleasant quarters remote from the wards, and relieving to that extent the existing overcrowding. The old assembly hall is now being reconstructed and will soon be available for the reception of about the same number of male employes. At the cottages for men, outside shoe-rooms have been built. The main reservoir has been cleaned, the bottom and walls relaid and cemented, and a brick filter placed at the outlet.

The work of repairing and beautifying the wards has gone rapidly forward, and in this respect the institution presents a very different appearance from that which it wore even a year ago. A fire brigade was organized during the winter, and, as often happens, by the time it had become fairly efficient there was work for it to do. On April the 28th, at 2 o'clock A. M., fire was discovered in the laundry, and although the department was promptly on hand, the flames had gained such headway that it was impossible to do more than prevent their spreading to the main hospital building.

The laundry, tailor's and matron's sewing-rooms, mattress-shop, bakery, engine-room, and boiler-room were destroyed, all of them being under one roof, and constituting the extreme end of an annex or "T" in the rear of the administration building. Contracts have been let and work has begun on a new laundry building and a building for stores and shops, both located at a safe distance from the buildings for patients. With the completion of the storage building and the removal from the basements of all articles now stored there, a decided advance in hospital sanitation will have been effected. In the line of diversions, an innovation this year was a grand Fourth of July picnic, at which hundreds of patients enjoyed the abundant refreshments provided, and were delighted with the oration and the ever welcome music of the band. The school for patients is continued with gratifying success, and the training school for nurses is in a thriving condition, seven graduates having received their certificates at the close of the last session.

NORTH CAROLINA.— *State Hospital, Morganton*.— The last General Assembly appropriated \$12,000 to erect a congregate dining-room for men. It is, in a general way, the counterpart of the one for women, built several years ago. From the fact that it is built on a hill-side, a well-lighted and commodious basement was constructed. This, it is proposed, will be used for various shops, such as shoe, mattress, broom, and basket shops, which will enable us to give employment to a class of patients who are unable, either from age or physical debility, to work on the farm or grounds. Finding employment for this class of patients is now practically impossible. In designing and erecting these buildings, one thing was kept constantly in view, and that was

economy in running them. This building will be ready for occupancy by the middle of January next. This addition will give accommodation to about one hundred more male patients, which will care for all the most urgent male cases for the next two years.

In the last biennial report it was estimated that this addition would cost \$18,000, this including another boiler and an enlarged cooking plant. This estimate will not be exceeded. Most of the furniture will be made in the shops, which will be a considerable saving.

OHIO.—*Cleveland State Hospital Cleveland.*—The installation of an ice-making machine has been completed, and hereafter it is expected to provide the institution with pure artificial ice. A morgue and laboratory are in process of completion.

—*Toledo State Hospital, Toledo.*—Each building has a room fitted up with modern appliances for aseptic surgery. During the year Dr. C. A. Kirkley of Toledo performed thirty-one gynecological operations, a detailed list of which accompanies the annual report of the hospital. The operation reached successful termination in twenty-seven cases. The effect upon insanity was nine recovered, eleven improved, and seven unimproved. In addition to these cases the following surgical procedures were accomplished during the year: Ten cases were trephined; there were four operations for hæmorrhoids; one median lithotomy; external operation for urethral stricture; removal of foreign body from male urethra; enucleation of two eyes; amputation of toe; three operations for necrosed bone; two operations for removal of enlarged tonsils; operation for correcting deflection of septum of nose; amputation of thumb; removal of tuberculous glands; three circumcisions; removal of cancer; tracheotomy for removal of food from the air passages; reduction of two cases of strangulated hernia; reduction of two cases of dislocated shoulder; treatment of two fracture of the leg, three fractures of the arm, and one fracture of the collar bone.

VIRGINIA.—*Western State Hospital, Staunton.*—The capacity of the Western State Hospital, Staunton, has been increased to 850 beds within the last two years. The erection of the new laundry, rendered necessary by the increase of population, has been commenced, and will be completed by September; it will be "up to date" in every respect, and will cost about \$8,000. A large amount of the work is being done by the patients. The improvements for the comfort and welfare of the patients in this hospital within the last four or five years have been very great, and at a less per capita cost, perhaps, than any hospital in the country.

WASHINGTON.—*Eastern Washington Hospital, Medical Lake.*—In the construction of a new wing the advisability of arranging each room for the accommodation of two patients was considered, and a letter of inquiry as to the feasibility of the plan was addressed to the superintendent of every hospital for the insane in the United States, with the question, "Do you believe it is well, as a rule, for two patients to occupy the same room?" Ninety-five answers were received. Seventy-five were pronouncedly against the method, four in favor, five did not differentiate between two and more than two in a room, and eleven believed it practicable in a limited number of cases. One

of the four who favored the proposition subsequently wrote that he had changed his mind since one of his patients had been strangled to death by her room-mate. A number of others reported homicides, dangerous assaults, and the formation of bestial habits as results of the plan.

CANADA, ONTARIO.—While it is true that Canada has done much for its insane, as a class, its treatment of the criminal insane has always been open to censure. Some authorities in high places have publicly stated that the “insanity dodge” will not work in Canada, as we make no mistakes, hanging nearly all of those criminals supposed to be insane. A few months ago an unfortunate fellow, named Almeda Chattelle, who was suffering from one of those shocking forms of mental trouble described by Kraft Ebing, was tried and convicted without even an attempt being made to prove the murderer’s mental unsoundness. It is scarcely necessary to state that the murderer was hanged. The Shortis case, in which the insanity plea is being urged, will take place in a few weeks, and a most interesting and bitter legal fight will be made by prosecution and defense, as the crime said to have been committed by Shortis was a particularly atrocious one.

CANADA, NOVA SCOTIA.—*Hospital for the Insane, Halifax.*—The treatment of epilepsy by some form of intestinal antiseptic, in connection with the drugs ordinarily used, has been adopted and the results are epitomized as follows: “Eight patients were selected for study. The records of these patients for 1892, when they were getting the bromide treatment as ordinarily advocated in the books, show that they averaged 12.3 fits per patient per month. At the beginning of 1893 five of these eight patients were put upon B-naphthol for three months, during which time they averaged 16.1 fits per patient per month, an average increase of 3.8 fits over the results of the ordinary treatment. Three of these five were then placed on sulfonal and salol (gr. xx and gr. v. t. i. d.) for a short period. The average number of fits fell to 10.5, but the condition of the patients became so pitifully stupid that we abandoned the treatment. During the second and third quarters of 1893 the treatment was mixed, some patients getting potassium bromide with, other without, antiseptic. The average was reduced to 8.75. Then we adopted as regular treatment, and practiced it rigidly for eight months, the combination of potassium bromide with cinnamon water. The average was again reduced, that for the whole of this period being 6.32. On the first of May last treatment was entirely suspended for twenty days. During this time the average rate of fits per patient per month was 23.4, and for the rest of the month (when the treatment was being carried on, but when the patients had scarcely become influenced by the drugs) it was 21.8. The treatment has since been continued, the average number of fits during June and July being a trifle less than 6.4 per patient per month. Throughout August intestinal irritation was prevalent in the hospital, and, despite the treatment, these eight epileptics averaged 9.5 fits.

We think it is reasonable to attribute this increase in the frequency of the convulsions, directly or indirectly, to the intestinal disorders. In September we substituted sodium bromide for potassium bromide. The average number of fits during the month was only 5.12.

OBITUARY.

DR. DANIEL HACK TUKE.

The present year has witnessed the passing of two great European alienists, whose names connect the present epoch with the great insane hospital reforms at the close of the eighteenth century. Calmeil, the pupil of Esquirol, who was the pupil of Pinel; and Daniel Hack Tuke, the great grandson of Pinel's contemporary reformer in psychiatry, have passed away, Calmeil in the comparative retirement of a nonegenarian, Tuke in the ripeness of his usefulness. Daniel Hack Tuke was delicate as a child, but early devotion to out-door science overcame this delicacy. After completion of his school education at the Friends' School at Tottenham he was induced to study law, despite his own predilection for medicine. In three months his legal studies ended and he entered upon preparatory medical studies. During these he held the position of steward at the York Retreat. He entered Bartholomew Hospital in 1849, and in 1852 became (in his twenty-fifth year) an M. R. C. S. E. In the following year he was graduated as M. D. from the University of Heidelberg. He then married, and on his honeymoon trip visited the Dutch, German, and French insane hospitals. In 1854, on his return, he published an account of these institutions. He was appointed visiting physician to the York Retreat and York Dispensary, and Lecturer on Psychology at the York School of Medicine. In 1857, on the death of his father, he made preparation to turn the family mansion into a private insane hospital. His plans were frustrated by an attack of hæmoptysis, which forced him to seek a different clime. He settled on his return at Falmouth. In 1874 he came to London and became a governor of Bethlem Hospital. At the time of his death from apoplexy he had nearly completed his sixty-eighth year. His careful, judicious life enabled him to survive a delicate childhood and predisposition to pulmonary disease, evident in the hæmoptysis at the age of thirty. Few men in the ranks of psychiatry ever inspired such enthusiasm in the younger alienists. In every country, the earnest worker found in Doctor Tuke sympathy and appreciation. At a time when American alienists were tabooing some of their best workers to such an extent as to cause the exclusion of papers read before the

first International Medical Congress held in the United States from its transactions, those very labors met from Doctor Tuke enthusiastic appreciation. In 1874 he offered as a memorial to the Tuke reformers the W. & S. Tuke Prize for the best essay on the somatic ætiology of insanity. This was awarded to Dr. E. C. Spitzka. It is an illustration of the different methods then obtaining in the United States and England that this essay had been among the papers excluded from the International Medical Congress of 1876. The somatic ætiology of insanity had been a problem to which Doctor Tuke devoted his attention. He was an ardent necroscopist, and, although a believer in Shelley's dictum that

Thought by thought is piled till some great truth
Is loosened and the nations echo round,

still he felt disappointed at the absence of definite lesions. He was too judicial, however, to fall into error then common with pathologists of regarding alcoholic artefacts as lesions. Less biased than most Britons by narrowing influences, his contributions to psychiatry were more in touch with non-British alienists. The work on psychological medicine, compiled in conjunction with Bucknill, is still of value, but the two minds were not suited for collaboration. Tuke's *magnum opus*, the Psychological Dictionary, reveals at once his cosmopolitan spirit and his tendency to encourage the younger workers of the profession. His eighteen years' editorial connection with the *Journal of Mental Science* gave it an impetus and standing which can only be lessened by years of deficiency. His work on the "Influence of the Mind on the Body" is still a medical classic in its diction and its data. Few alienists leave such a world-wide gap in the ranks of science.

J. G. K.

ITEMS.

IT HAS BEEN DECIDED by the highest authorities in Ireland that the district asylums are responsible for the care of all the pauper insane, and that the law makes no distinction of classes, as regards their maintenance. This is the State-care principle, and will probably lead to the abolition of lunatic wards in workhouses.

THE LANCET of March 23, 1895, notes the restoration to health of Doctor Wigglesworth of Rainhill Asylum, who was attacked by a patient. (See October, '94, JOURNAL, p. 271.)

DR. ALLAN McLANE-HAMILTON is, it is announced, to hereafter divide his professional work between New York and London.

DR. D. R. BROWER suggests, in a paper read before the Illinois State Medical Society, the addition to the marriage license of certificates by a qualified medical practitioner that both parties are in good health, that they are not criminals, drunkards, or paupers, and that their grandparents were not insane, epileptic, suicidal, or in any way degenerates. If practicable, such a regulation were well, but we fear it will be so only after the millennium has arrived and the regulation is no longer needed.

PROFESSOR KOCHER of Berne reports that he has practically abandoned the total for the partial extirpation in the operation for goitre, and that in this way he has avoided cachexia strumapriiva almost entirely. He hopes that internal medication will be still further substituted for the operation, and showed photographs illustrating the good effects of thyroid medication.

IN NEW YORK STATE the insane are to be supported by a special 1-mill tax, which, according to the New York *Tribune*, will produce annually the amount of \$4,292,082, which will be applied to cover all the expenses of the State care of the insane, and a proper proportion will also be devoted to the insane in the care of the city of New York.

DOCTOR OLMSTED, superintendent of the Connecticut Hospital for the Insane, calls attention to the fact that the plan of giving the patients a day's outing in a steamboat excursion was first originated and carried out in the 70's in that institution.

THE NEW ASYLUM at Hartwood, near Glasgow, Scotland, was formally opened May 14th, with all the latest improvements. A full description of the institution and the opening ceremonies is given in the Glasgow *Herald*, May 17th. Our esteemed correspondent, Dr. A. Campbell Clark, the superintendent of the new asylum, has our congratulations.

THE FACULTY of the Northwestern University Woman's Medical School have instructed Dr. Marie J. Mergler, their secretary, to publish a series of resolutions against the admission to practice in the State of Illinois of those who have failed to pass its examinations.

It is probable that the standard of this school is as high as, or higher, than that of any State examining board, which must necessarily be drawn on rather broad lines. As a move to a higher general standard, however, and an indication of the professional demands in that direction, these resolutions are of interest.

APPOINTMENTS, RESIGNATIONS, ETC.

- ADAMS, CHARLES E., appointed Assistant Physician at the Taunton Lunatic Hospital, Taunton, Mass.
- BARRETT, ALBERT M., appointed Fourth Assistant Physician and Pathologist at the Iowa Hospital for the Insane, Independence, Iowa.
- BENTLES, W. F., promoted to be First Assistant Physician at the Milwaukee Hospital for the Insane, Wauwatosa, Wis.
- BOYNTON, EDWIN D., appointed Assistant Physician at the Worcester Lunatic Hospital, Worcester, Mass.
- BROTHERS, H. D., resigned as Assistant Physician at the Kansas State Insane Asylum, Osawatomie, Kan.
- BRYANT, PERCY, promoted to be First Assistant Physician at the Buffalo State Hospital, Buffalo, N. Y.
- CARTER, F. P., appointed Second Assistant Physician at the Milwaukee Hospital for the Insane, Wauwatosa, Wis.
- COOK, R. HARVEY, appointed Assistant Physician at the Oxford Retreat, Oxford, O.
- DRAKE, F. I., appointed Second Assistant Physician at the State Hospital for the Insane, Mendota, Wis.
- EMERICH, E. L., promoted to be First Assistant Physician at the Cleveland State Hospital, Cleveland, O.
- FINEFROCK, —, appointed Clinical Assistant at the Cleveland State Hospital, Cleveland, O.
- GILLETTE, E. J., appointed Assistant Physician at the Brigham Hall Hospital, Canandaigua, N. Y.
- GUILLOT, H. C., resigned as Assistant Physician at the Eastern Michigan Asylum, Pontiac, Mich.
- HAGENBUCH, WM. H., appointed Assistant Physician at the Kings County Lunatic Asylums, Brooklyn, N. Y.
- HARRINGTON, ARTHUR H., formerly Assistant Physician at the Danvers Lunatic Hospital, Danvers, Mass., appointed Physician in Charge of State Insane Criminals, State Farm, Mass.
- HERZOG, H. H., formerly Second Assistant Physician at the State Hospital for the Insane, Mendota, Wis., appointed Assistant Physician at Rochester State Hospital, Rochester, Minn.
- HIGLEY, R. S., appointed Assistant Physician at the Cleveland State Hospital, Cleveland, O.
- HUGHES, J. G., resigned as Assistant Superintendent of the State Hospital for the Insane, Mendota, Wis.
- JAMES, FRED. W., resigned as Assistant Physician at the Kings County Lunatic Asylums, Brooklyn, N. Y.
- JAMES, HOWARD, resigned as Assistant Physician at the Kings County Lunatic Asylums, Brooklyn, N. Y.
- JONES, LYMAN A., resigned as Assistant Physician at the Worcester Lunatic Hospital, Worcester, Mass.
- LYMAN, W. A., promoted to be First Assistant Physician at the State Hospital for the Insane, Mendota, Wis.
- MACGUGAN, ARTHUR, appointed Assistant Physician at the Michigan Asylum for the Insane, Kalamazoo, Mich.
- MACK, GUSTAVE A., appointed Assistant Physician at the Kings County Lunatic Asylums, Brooklyn, N. Y.
- MANNY, J. HARVEY, resigned as Fourth Assistant Physician at the Iowa Hospital for the Insane, Independence, Iowa.
- MCCRAIG, J. E., formerly Assistant Physician at the State Hospital for the Insane, Danville, Penn., appointed Assistant Superintendent at the Kansas State Insane Asylum, Topeka, Kan.
- McKENZIE, J. A., appointed Assistant Physician at the Nova Scotia Hospital for Insane, Halifax, N. S.
- McLAUGHLIN, H. F., reappointed Assistant Physician at the Kansas State Insane Asylum, Osawatomie, Kan.
- MEISBURGER, WM. C., resigned as First Assistant Physician at the Milwaukee Hospital for the Insane, Wauwatosa, Wis.
- NEFF, IRWIN H., formerly Assistant Physician at the Michigan Asylum for the Insane, Kalamazoo, Mich., appointed First Assistant Physician at the Eastern Michigan Asylum, Pontiac, Mich.
- SANBORN, CHAS. F., resigned as Assistant Physician at the Kings County Lunatic Asylums, Brooklyn, N. Y.
- SEARL, W., formerly Assistant Physician at the Cleveland State Hospital, Cleveland, O., appointed Assistant Superintendent of the South Dakota Hospital, Yankton, S. D.
- SIMMS, C. S., resigned as Assistant Physician at the Oxford Retreat, Oxford, O.
- SMART, L. G., formerly Assistant Physician at the Sheppard Asylum, Towson, Md., appointed Superintendent of the State Asylum for Feeble-Minded, Owings Mills, Md.
- SPRAGUE, GEORGE P., appointed Assistant Physician at the Danvers Lunatic Hospital, Danvers, Mass.
- VANDERBEEK, C. A., resigned as Assistant Physician at the Brigham Hall Hospital, Canandaigua, N. Y.
- WALLACE, ROBERT G., promoted to be Sixth Assistant Physician at the Binghamton State Hospital, Binghamton, N. Y.
- WHEELER, ERNEST H., resigned as Assistant Physician at the Taunton Lunatic Hospital, Taunton, Mass.
- WILLIAMS, B. G., appointed Assistant Physician at the Kings County Lunatic Asylums, Brooklyn, N. Y.

AMERICAN JOURNAL OF INSANITY.

OCTOBER, 1895.

THE SIGNIFICANCE OF MOTOR DISTURBANCE IN INSANITY.

BY A. B. RICHARDSON, M. D.,

Medical Superintendent Columbus State Hospital, Columbus, Ohio.

The essential unity of mind is an axiom. It has its different phases, its subdivisions and varying forms, but the omnipresent and unvarying *ego* binds all together in one indivisible whole whose individuality is always unique and sharply defined.

The text of this paper is the indivisibility of brain activity. The purpose is to call attention to the inseparable character of all cortical action, the dependence of each class upon the other, be it sensory, motor or ideational, and in particular to dwell upon the nature of the motor disorders that accompany the ideational disturbances; to indicate, if may be, the points of consonance in their states of diseased functions, and especially to call attention to the value that motor phenomena so frequently have in determining questions of diagnosis and prognosis in mental disorder.

It is quite reasonable to anticipate that this study will prove important. A large part of the expression of ideation is in form of muscular activity. It is true that the localization of functions in the brain has brought into marked prominence the preponderance of activities of certain types in certain areas, and we fear that the emphasis that has been given to such evidences of localization has in too great degree thrown in the background and covered over the fact that this localization is, after all, only the localization of centers from which cortical activity finds egress in certain forms, dependent, after all, upon other parts of the cortex for their especial kind of activity and possessing in themselves also many other kinds of energizing capacity.

The interdependence of all these so-called centers is well illustrated in mind disorders. The functions of the cortex are, after all, essentially indivisible, be these sensory or motor, ideational or

reflex and instinctive. The varieties of motor disturbances that are found in insanity are numerous. Their significance varies greatly. I have thought that it might be useful to divide them generally into two classes. The first class might be termed incidental, the second essential.

As an example of the first may be mentioned the hemiplegia or monoplegia that sometimes precedes or complicates insane states. As an illustration of the second may be named the speech disturbance of the paretic, in which the disturbance in the motor mechanism seems inseparably bound up with the dementia of the disordered mind activity. Of the former it is not our purpose to speak at length. It is probable that they are found in greater proportion among the insane than in the sane. The vulnerability of nervous tissue that finds expression in mental derangement also shows itself in vascular degenerations and the grosser forms of disease that cause the paralyses. Extravasations, thrombi, and emboli are probably more numerous among the insane than among the sane; so also doubtless are cerebral abscess, foreign growths, or the special degenerations of syphilis, tuberculosis or carcinoma. I know of no accurate statistics on these points, but our experience readily recalls the frequency with which fatal terminations among the insane occur from one or the other of these complications. The relation of certain forms of infantile paralysis to imbecility and idiocy is something similar to this. There is in some of these cases doubtless a direct causative relation between the hemiplegia or other paralytic affection and the general defect in development of the cerebral cortex. In other cases the connection is only incidental. The tissues of the cortex are more vulnerable and the grosser lesions more frequently occur at the time that a general error in nutrition is seen that results in general defect in the cortical development.

Passing to the second class it is of interest first to notice how motor disturbance and defect is connected with states of intellectual deficiency. In almost every case of intellectual deficiency more or less error in muscular development will be seen to accompany it. The muscles are of small size and defective power. Even in the cases that are of comparatively better muscular development, in which the individual groups of muscles are of apparently normal size, slowness in reaction time under stimulus, and defective coördination of the different groups are found. There is a marked awkwardness in gait and inability to perform the

nicer and more delicate muscular movements; just as the cells that coöperate to evolve complex ideas and develop forms of intellectual energy are unable, through absence or imperfect development of communicating channels, to produce the evidences of this coöperation, so are the cells that stimulate individual muscles, through the same want of connecting lines, unable to coöperate with others to evolve the more complex and more finely adjusted muscular movements. This applies to the muscles of locomotion, in which defective coöperation and diminished power is very generally noticeable, and also the muscles of articulation. Speech is slow and imperfectly articulated. It is not so much incoördination as want of coördination, not so much confusion in the activity of separate muscles as absence of power to bring them into combined movement. Just as in the intellectual field weakness and limited range are the characteristics, so in the motor field simple movements of limited extent are alone possible. It is interesting to parallel the awkwardness and limited range of motor power in cases of imbecility with the limitation in ideational activity.

In the treatment of such cases improvement in the one field comes in the same manner and from the same kind of training as in the other. The muscular power is increased and its range enlarged by methodic exercise of muscles, bringing more and more of them into combined action and subjecting them gradually to more prolonged and more complex tasks. The ideational field is extended and developed in like manner. Simple intellectual tasks are gradually made more complex, and step by step the range is widened as new channels of communication are opened by extension of fibrillary ramifications in the cortex. Neither can ever attain marked prominence, because the number of the cells is limited and the extent of their fibrillary ramifications also restricted by nutritive error or deficiency.

Coming to the more active forms of insanity the parallel may be continued in the study of dementia. The facial expression, the attitude, the range of movement in the dement all betoken diminished intercommunication of cortical cells, a marked limitation in muscular power, and a reduction to simpler forms. The complex in motor action becomes more difficult or impossible, the same reductions being seen here as are noted in the ideational realm.

There is a form of dementia designated as organic that is more likely to be associated with *foci* of degeneration in the cortex, giving rise to localizing symptoms in the motor field. This is because

the degenerations of this form are grosser — that is, more complete in the cells or groups of cells that it attacks, more irregular in extent and less molecular in character. We will see as we pursue our study that the presence or absence of distinct localized motor phenomena in insane states depends upon the character of the degenerative process rather than upon its extent. If it is gross in character — that is, a complete destruction of the parts affected rather than molecular — then we may expect more evidence of complete loss of motor power in certain areas or more evident limitation of this power. If it is molecular — that is, not accompanied by complete degeneration and complete destruction of functional power in certain cells or groups — there is diminution but not complete loss of muscular power and less pronounced, less complete loss in ideational capacity. In each case the character of the degenerative process, as evidenced in disordered functions in one field, shows itself by similar evidences in the other area.

Let us turn next to the changes of senility. Compare in these the effects in the ideational field with those in the motor. The same correspondence is to be noted. In old age the ideas are of more limited range, new thoughts are more infrequent, there is a tendency to fixation, an aversion to change, a loss of memory, enfeeblement of intellectual grasp and a general aspect of weakness and unsteadiness. At the same time there is a gradual diminution in motor power. There is the bent form, the relaxed facial outlines, the unsteady and uncertain gait, the weakness of tremor, the loss of confidence in power of equilibrium, as shown in use of staff or the arm of another. The speech of the senile is especially characteristic of this union of phenomena. It is ataxic, amnesic, and aphasic. The loss of memory limits the range of expression, the weakness of mind is seen in the slowness of reaction time and the simplicity of the expression, while the motor disturbance is seen in indistinct and hesitating enunciation, piping voice, and the restricted power of modulation and absence of forceful and clear-cut articulation. Here, too, the varying types of mental disease are accompanied by varying motor phenomena. Pure senile dementia is a negative state, a limited range of action in mind and body. Senile mania and senile melancholia show less actual loss of power and more confusion, there is less loss of memory and less paresis, more emotional disorder and more muscular restlessness. The fact that the degeneration is not so complete nor destructive is seen in the one set of symptoms as it is in the other.

Take again the insanity of alcoholism; tremor, impaired equilibrium, weakness, ataxic and aphasic speech are among the motor phenomena of the alcoholic. Irregularity is a prominent symptom. So also in the ideational realm, rapid emotional fluctuations, instability, weakness, amnesia, a blurring of the intellect, and fleeting hallucinations are prominent signs of disorder. In this form of insanity motor disorders are nearly always present. They are characterized also by irregularity and marked variations, and in no other form of insanity are the pathological changes more variable or more unequal in distribution. While they are pronounced where they do exist, and destructive in character, they attack cells and groups of cells in an irregular and seemingly erratic distribution. Large areas are not affected, so that distinctly localized symptoms are not numerous, but tremor, muscular weakness, incoördination and loss of capacity for delicate motor manipulation all betoken the presence of destructive lesions of irregular distribution and extent.

In the motor as in the ideational field the symptoms are correspondingly special and characteristic, noticeable for their irregular exhibition and their elements of instability.

In epileptic insanity there is also a most interesting correspondence between the disorders of the motor field and those of the intellectual zone. The motor disturbance of the epileptic attack has many points of resemblance to the mental symptoms of the insanity that so frequently results from the disease. It is paroxysmal and explosive, violent and sudden; so also are the mental symptoms paroxysmal, often sudden and unexpected in development, violent and explosive, and notoriously uncertain. The change in disposition in the epileptic is remarkably characteristic. From this change alone an experienced observer will frequently be led to suspect the presence of epilepsy. There is present extreme irritability, a combative tendency, undue suspicion, and sudden and violent outbreaks of temper from comparatively slight causes.

It is easy to note the points in which these show resemblance to the well-known motor phenomena of the epileptic attack. The correspondence may be carried farther, however. It is well known that epileptic insanity has a marked tendency to develop dementia. The enfeeblement is pronounced and characteristic and often rapid. In the chronic form it often reaches a most extreme degree. Our epileptic demented are among those mentally most helpless and most pitiable, wrecks of the saddest type. They are often easily distinguishable, and not from their mental characteristics, or the

absence of them alone, for the motor phenomena are equally peculiar and significant. The awkward gait, expressionless countenance, immobile or unnaturally distorted; the rigidity of muscles in the extremities that causes each individual digit to stand out apart from its fellows; the slow and imperfect speech, all show in this area the same degenerative changes, preventing the coöperation of groups of cells in rhythmic action. The range of action is greatly restricted, the more delicate movements are impossible, fine adjustments can not be made, and the movements are comparatively simple in kind. It is interesting to watch the movements of the chronic epileptic in whom dementia is pronounced, and to compare the mental with the bodily states. The kind of degeneration that is portrayed in one will be seen also in the other. If the dementia is considerable the awkwardness, speech disturbance, and restricted muscular action will also be evident. If there is but little dementia there will be less motor depreciation. The exceptions to this rule are remarkably infrequent.

It is in paretic dementia particularly that motor disorders have been most conspicuous in the standard descriptions of insanity. We have reserved consideration of this variety thus far because we desired to make prominent the fact that motor symptoms were of interest in many other forms as well as in this, which has been, heretofore, most conspicuous in literature. Paretic dementia has sometimes been called a premature old age, and, as far as the motor symptoms are concerned, there is a marked correspondence between the two forms. Dementia is prominent in each, with motor enfeeblement, speech disturbance, and often impaired coördination. As in the other forms of mental disorder, so here we find a characteristic combination of the two sets of symptoms; where the dementia is marked, the mental enfeeblement conspicuous, we see, also, slow speech, slow movement, awkward gait, limited range of movement, an extremely limited power of combining movements, and inability to execute the delicate and complex, where coördination is most required. The writing of the paretic in this form of the disorder is most characteristic in the evidence it gives of loss of memory, of motor function in the elision of syllables, and the omission of letters, or of whole words. In the more active forms, characterized by exalted delusions and general extravagance and disorder in ideation, we find overaction and disorder in the motor field. The motor symptoms show this in the failure to execute intended movements correctly, the confusion in coördination. In both fields the rapid approach of weak-

ness and destructive degeneration is prominent. In this form of insanity the destructive nature of the diseased processes is the most conspicuous of all insanity. In this form motor complications are most numerous and most conspicuous. In this form persistent and complete dementia, rapidly supervening, is most prominent; and in this form, also, motor enfeeblement, rapidly progressing, permanent, and resulting ultimately in complete paralysis, is a prominent part of the symptomatology.

Turning for a moment to the general varieties of insane states, if we may so speak, how often we are led to speak of a paralysis of volition. Patients say, "I know I should do so and so, but I simply can not do it." There is a full knowledge of what is required, but when the time of action comes the patient simply can not bring about a rise of energy in cell activity to the point of action. This paralysis of will relates both to ideation and to movements. The motor functions are inseparably bound up with the general ideational activity and the process affects all alike. Similarly the nature of insane states is portrayed in the motor symptoms of stuporous insanity, in mania, and in melancholia. That these changes are more molecular, more essentially nutritive errors, rather than destructive processes, is shown in the absence of actual loss of motor power and the absence of evidences of prominent motor enfeeblement.

This paper is already too long and we must hasten to a close. We have avoided statistics, that are often misleading because based upon erroneous data, and we have also avoided the description of special cases. The object has been to bring more prominently into view the intimate connection that exists generally in insanity between the motor functions and the pure intellectual activities of the cortex, a connection that should lead us to study the states of motor activity in any case of mind disorder.

As expressed in the muscular activity, the nature of the pathological change is often as surely shadowed forth as in the phenomena of mind disorder. A conclusion that seems impressed upon us is that the activities of the cerebral cortex are, after all, a unit.

They all go together to make up one harmonious whole, and the perversion of the *ego* in insanity is the evidence of a general disturbance in the cortex. Because, therefore, signs of disorder seem limited to certain intellectual areas, we should be careful not to be too hasty in placing a limit on its influence over other activities of the cortex. There is a certain indivisibility of cortical energy that

makes limitation in the influence of pathological changes of purely cortical character well nigh impossible.

The general nature of the essential motor disorders of insane states indicate that they are disorders of the elements that originate activities rather than of the centers from which these activities finally leave the cortex. The accidental motor symptoms are, on the other hand, more directly connected with the pathological changes of these centers. It seems to the writer, too, that a conclusion that is justifiable, and also borne out by histological investigation, is that the motor element is a cell rather than an area, a cell that probably differs in form from cells with other functions, but is not restricted to certain areas of the cortex. The division would seem to be more naturally among the forms of cells and the layers of the cortex rather than among special areas.

I refer now more particularly to the elements that originate impulses, ideational, sensory, or motor, rather than to the elements through which they finally leave the cortex. If my meaning is clear a distinction can be drawn between the two classes of elements, and it is the intimate and indivisible blending of the one class that gives rise to the indivisibility of the symptoms in insane states and the difficulty in accurately determining the extent of the disease in the cortical functions.

THE CRIMINAL INSANE ABROAD.*

BY C. EUGENE RIGGS, A. M., M. D.

To speak of asylums for the criminal insane abroad means chiefly to speak of Broadmoor and of Perth, for in this, as in most similar advances, Great Britain leads Europe.

The history of criminal lunacy legislation in England dates back to 1800, when a man named Hadfield, who had attempted the life of the king, was tried and found insane. The question arising as to how the prisoner was to be disposed of, the law upon the subject was found to be so unsatisfactory that it was at once amended by a statute providing that persons acquitted of crimes on the ground of insanity, or found insane on arraignment, might be ordered to be held in custody by the court during His Majesty's pleasure. The question of where such prisoners should be confined arising, wards for the reception of them were subsequently constructed at the Bethlem Hospital. In 1849, further provision being required, an arrangement was entered into with the proprietor of a private asylum (Fisherton House, near Salisbury) for the erection of wards to accommodate the excess from Bethlem.

That, however, the provision made during all these years was insufficient would seem to be indicated by various reports and recommendations. A report to the House of Lords, made by a select committee in 1835, urged that such lunatics "should not be confined in prisons or houses of correction," while in 1840 an act was passed having for its purpose the removal of such lunatics to asylums during their insanity.

Another special committee was appointed in 1860, and in their report pointed out the disadvantages of the association of the criminal with the ordinary insane as they are now generally recognized among us. They averred that the association is painful and injurious to both parties; that the presence of the insane criminals diverts attention and care from the other patients which is their due, and imposes upon all a far stricter discipline than is just to the majority, thus continuing the error that an asylum is a prison; also that, on the other side, the criminal insane were exposed to insult from the ordinary patients, and were irritated by seeing others

* Written for the American Neurological Association.

accorded privileges which could not be granted to them. The report said, "To mix such persons with other patients is a serious evil * * * but to liberate them on recovery, as a matter of course, is a still greater evil and could not be sanctioned, for the danger to society would be imminent and extreme."

Following this report the so-called Broadmoor Act was passed, by which Her Majesty is enabled to appoint any asylum or place in England that may be found suitable, to be an asylum for criminal lunatics. Broadmoor was so appointed and was opened in 1863.

Broadmoor does not, however, contain at present all the criminal lunatics of England. The practice is to send to Broadmoor all "queen's pleasure" lunatics charged with serious crime, and all female convicts becoming insane while under sentence of penal servitude; to remove to and retain at Woking Convict Prison all insane male convicts under sentence of penal servitude until within a few weeks of the expiration of their sentence, when they are removed to Broadmoor. It should be stated that the lunatic wing of Woking was established in 1875 for an asylum, but has never been declared a criminal asylum under the Act of 1860, hence the formal necessity for returning the convicts to Broadmoor at the expiration of their sentence, as the law only provides for their discharge or transfer from that place. Weak-minded convicts who have not been satisfactorily shown to be unfit for prison discipline, and yet require special treatment, are removed to and retained at Parkhurst or Dartmoor prisons.

Access to Broadmoor is not easy. To obtain permission to visit it, I was informed that it was necessary to go to the office of the Home Secretary. But, permission once obtained, I met with most courteous and hospitable treatment.

Broadmoor is situated in a beautiful rolling country in the County of Berkshire, some thirty miles from London. The entire asylum is surrounded by high brick walls, which do not, however, owing to the hilly aspect of the country, entirely exclude the distant landscape from view. The sections for men and for women are each divided into blocks. The establishment is lighted by gas. There is a large general library, and also smaller collections of books in the separate sections. There is a large recreation hall in each section. The men's section contains a stage for amateur theatricals, and they have all the usual amusements. Of the detail and management of the asylum I can say, with a French critic, that it unites the utilitarian English spirit with modern scientific progressiveness.

At the time of issuing the last report there were 640 inmates, 481 men and 159 women. Of these 340 had committed homicide (209 men and 131 women), while 168 were under detention for attempts to murder, maim, etc. The large proportion of homicidal cases among the women had committed infanticide while suffering from puerperal insanity. I was, I confess, surprised and a little shocked to find that these persons were apparently regarded as being as dangerous to the community as homicidal cases of another sort. Their discharge takes place infrequently, and is hedged about with as many formalities as any other, even when they are recognizedly sane.

Conditional discharge is the course generally adopted when a Broadmoor patient is set at liberty. An application for such discharge may be set in motion by the authorities of the asylum, the friends of the criminal lunatic, or that person himself. It is granted, when it seems advisable, on the undertaking of some responsible person to look after the individual, and the discharge is only made after a considerable period of detention and careful inquiry into the case.

In the thirty years since the opening of Broadmoor there have been 1,997 cases admitted, not counting the readmissions, while in the same time there have been but 185 discharges on recovery. Of these twenty-six have relapsed and been readmitted — a showing which is probably due to the great care taken in the matter of choosing patients for discharge. The condition habitually inserted in the warrant of discharge, which comes from the Home office, is that the patient shall immediately return into the same or other custody, when required to do so by the Secretary of State. The warrant can be varied, if need be, to suit individual cases.

The “queen’s pleasure” lunatics committed to Broadmoor remain there, except in case of recovery and conditional discharge, but the convicts who have become insane, if discharged unrecovered, are returned to the county or borough asylum of the district in which their crime was committed.

A superficial survey of Broadmoor, its grated doors, etc., gives the aspect of a prison, but as far as I was able to judge in a day’s survey, the care is distinctly that of an asylum. There are the usual occupations. As many patients as possible are employed in various industrial pursuits. The number so employed is given in the last report as 362, the value of their work during the year being

\$20,800, of which one-eighth is allowed the workers. The outdoor employment of male patients is difficult, as attempts to escape follow any increase in freedom. The garden had just been inclosed in a 16-foot wall, which would render it possible to employ men there who had previously been restricted to in-door occupations. Some of the female patients take walking exercises outside the grounds, but it has not been found feasible to take the men out. The number of attendants, including all service, is one to every six patients.

Dr. Nicholson, the superintendent, is a most intelligent and genial gentleman, with an obvious sub-stratum of British firmness to his character. He impresses one as in every way qualified for his responsible position. He is naturally the usual expert witness for the Home office in great criminal trials, and one feels sure that he would mete out absolute justice.

One of the patients with whom I talked at Broadmoor is an American, a paranoiac, who, during a visit to the National Gallery in London, attacked and killed a man. He was found insane and was sent to Broadmoor. He has occasional excited times at night, but otherwise is well and sane. He is a scholar, and is considered a very brilliant man. His little room is full of books, and I was told that he was engaged in some philological writing for a work in the process of publication at Oxford.

An inquest is held upon every death at Broadmoor, and an autopsy performed. This, however, is not the case at Perth. I was asking Dr. McNaughtan, the medical officer at the latter place, if he had made any cranial measurements of his patients, and was told he was forbidden by law to do so, or to hold autopsies.

In Scotland the criminal insane are cared for in buildings on the grounds of the general prison at Perth, but disconnected from the prison buildings. The number of patients, when I visited the place, was fifty-four; forty men and fourteen women. I obtained permission to visit this lunatic department, as it is termed, through Dr. Sibbald of the Scotch Board of Commissioners in Lunacy. Dr. McNaughtan received me most cordially and afforded me every opportunity for examining his institution. He said that in his experience there were both advantages and disadvantages arising from the connection of a criminal lunatic asylum with a prison. The advantages were the greater economy, and the use of the larger prison staff in an emergency; the disadvantages, the divided authority of the prison governor and medical superintendent in the

department, and the danger of the penal discipline penetrating and affecting the management of the insane.

The inmates have the usual amusements and occupations. There is a garden of four acres where the insane patients raise vegetables for the entire prison. Although 50 per cent of the male patients, mostly homicidal cases, work here with tools in their hands, there has never been a fatal accident.

There is a bowling-green and an open-air court with a sunk wall, affording a beautiful view over the rolling landscape to the Tay. The patients are allowed six hours a week for exercise outside the walls, sufficiently guarded. This exercise is usually taken in long country walks. If they do not behave well while walking they lose their tobacco and butter, "not as a punishment, but as a reminder," and they are taken off the garden-working force, which is considered a deprivation. No mechanical restraint has been used for ten years; seclusion, however, is occasionally necessary. Dr. McNaughtan said he found the criminal insane, as a class, were more insubordinate and difficult to deal with than the ordinary insane.

He also mentioned something which seemed to me curious and interesting, namely, that epilepsy and general paralysis, both so common in ordinary hospitals, did not figure here. There were but two cases of epilepsy among the inmates, and during the thirteen years which he had held office there, there had been but one death from general paralysis, and there had been but three other cases in all that time, these three having been removed before the disease had run its course. Evidently general paralysis was not a form of insanity which led to the commission of serious crime in Scotland. The same thing would appear to be true in France, as Camille Allaman, in his work on the criminal insane, places it at the foot of his graded list of forms of insanity which lead to the commission of crime. On the other hand, he finds epilepsy very malignant in this respect, and ranks it above everything but impulsive insanity in its power to lead to crimes. Among the fifty odd cases at Perth there were six which were primarily alcoholic. This, said Dr. McNaughtan, was about the usual proportion.

There are, from the point of view of the American alienist, two criticisms to be made of the British systems of caring for the criminal insane. I have already indicated one of these objections in referring to the view taken of puerperal cases. I gathered that if application was not made by some friend for the conditional discharge of patients of this sort, they would be kept under asylum

supervision during their lives. There seemed indeed to be a feeling that it was better that it should be so, rather than that such women should return to ordinary life, perhaps to have other children and possibly to relapse into insanity again. As, however, puerperal insanity in many cases does not arise from the presence of the insane taint, and therefore in such cases is not presumably transmitted to offspring, it would seem an interference with the liberty of the individual, unwarranted by any compensating benefit to society, to delay the return of such patients as have recovered to their ordinary life.

The other criticism is that the present system does not, after all, permanently separate the criminal from the ordinary insane. As I have stated, convicts or prisoners spend the term for which they have been sentenced at Broadmoor. At the end of that time they are no longer technically "criminally insane," and are returned from Broadmoor to the borough or county asylums of the district in which their offense was committed. This, of course, is not in accordance with the idea of the separation, not of the technically, but of the really criminal insane from the ordinary insane as it is held among us, nor is it in harmony with the views of the special committee of 1860 already referred to.

The commission appointed in 1880 to inquire into the subject of criminal lunacy took evidence, among other points, upon this of the separation of ex-criminal from pauper lunatics. It was found that the proportion of criminal and ex-criminal insane among the pauper lunatics of England and Wales was considerably less than 2 per cent.

While various witnesses before the Commission alleged their belief that the association of this class with the ordinary pauper was detrimental, the conclusions of the Commission were embodied in the report as follows:

"We are inclined to think this allegation can not be accepted, at all events not without important qualifications. It is necessary to remember that there are criminal lunatics who, up to the time when they committed some offense against society, had led useful and irreproachable lives. They belong to the same class as the ordinary lunatic. * * * It must also be borne in mind that if the number of pauper lunatics in the county and borough asylums who have crime in their history were known, it is beyond doubt that it would be a large number. * * * All the witnesses who were examined in connection with this subject unanimously admitted that pauper

lunatics are largely drawn from the lowest and worst classes of the community—that is, from the same classes which yield largely the inmates of prisons—thieves, prostitutes, drunkards, the idle and dissipated persons leading turbulent lives and given to violence, persons unrestrained either by intelligence or morality. The association of such paupers with criminals in asylums would be nothing more than the renewal of an association which had existed outside of asylums, and in that renewed association the number of vicious and bad pauper lunatics would very greatly exceed the number of criminal and ex-criminal lunatics.”

It is further said: “It is not a question before us whether ex-criminal lunatics not becoming insane in prison, but having a history of crime, should be removed from county and borough asylums. Such a large and sweeping proposal has not been made, and if made is not likely to be considered.”

If I rightly apprehend the drift of sentiment in our own country, however, it is precisely this ideal at which the agitation for separate asylums for the criminal insane ultimately aims—namely, the separation not only of the technically criminal, but of the insane persons whose previous lives have been turbulent and evil, and whose instincts are low, from the ordinary insane. It does not need saying that the majority of the inmates of our own State institutions, especially in Minnesota, New York, and Ohio, where all classes of the insane are the charge of the State, do not belong to the classes named above as chiefly populating the English county and borough asylums. There is, therefore, the more need for a close classification, based as nearly as may be on criminal tendency, and may the day hasten which renders its accomplishment practicable.

On the continent of Europe, as I intimated, there has been little done toward separating the criminal insane. The subject has been much agitated in France, but I was told by Dr. Chaslin of the Bicêtre Hospital, Paris, that French legislation upon the subject was in a very unsatisfactory condition. Part of the criminal insane of France are cared for at the Bicêtre. I was shown their quarters. A semi-circular hall which we entered was separated by bars from a promenade where they exercised, their iron-doored cells opening into the promenade. The impression produced was extremely dreary and prison-like. The Bicêtre in fact was formerly a prison, and still retains that aspect. There exists at Gaillon a special quarter for criminals who have become insane during the course of their sentence. In Italy three asylums for the criminal insane

were voted some time since, one for the north of Italy at Turin, one for the south at Aversa near Naples, and one at Imola for Central Italy. I have been unable to secure any details regarding them. There are no other criminal asylums in Europe. An investigation was undertaken a number of years ago by the French *Société Général des Prisons* as to the condition of legislation regarding the criminal insane in Europe. Its results showed that, in general, insane convicts were transferred to ordinary asylums, and that persons acquitted of crimes because of insanity were either set free or sent to asylums. In Austria they are placed in the hands of the police, who decide whether they shall go free or be relegated to asylums.

CHRONIC DELUSIONAL INSANITY WITH ACUTE ALCOHOLISM — A CLINICAL CASE.

BY B. D. EASTMAN, M. D.,
Superintendent Kansas State Insane Asylum.

It occasionally happens to every asylum superintendent to see a case which at first appears to be acute maniacal excitement of an evanescent type, but which, after one or two speedy recoveries, shows itself to be delusional insanity. The explanation of this apparent change of type is that, in the early stages of such mental disease, the delusions become active only under some special influence, but as the disease progresses the delusions become permanent.

Among many such cases I particularly recall one, represented as having a sudden, violent attack of homicidal mania, but never showing any homicidal symptoms after admission to the asylum. In process of time this patient was discharged as recovered, but soon suffered a relapse and was readmitted. The general history, speedy relapse, and general appearance of this case convinced me that concealed delusions lay at the bottom of this man's maniacal outbursts, and I was satisfied they would in time come to the surface. For about a year this patient appeared so well that no one unacquainted with his previous history would have regarded him as insane. Indeed, had I been called upon, within several months of his admission, to defend my detention of him, I could only have stated that according to his commitment papers he had had two or three sudden, violent maniacal attacks, caused, in my belief, by delusions which, under the quietness of asylum life, were concealed, or at any rate dormant, and that in time these delusions would come to the surface. After about a year my opinion was verified, and the delusions under which he committed his homicidal attacks became permanently apparent.

It sometimes happens that a patient finding his delusions are regarded as evidence of insanity, endeavors, with more or less success, to conceal them, and sometimes becomes very expert in this, but rarely succeeds in his deception, especially when the key to his delusions is known.

A few years ago I was so peculiarly and completely deceived by a patient who concealed his delusions that a report of the case may be interesting and possibly instructive to the members of the society.

On July 12, 1886, there was admitted to the Topeka Insane Asylum one C. B., a native of New Jersey, age forty-five, married, and by occupation a lumber dealer. He was naturally very quiet and gentlemanly in his bearing.

The whole history of the case, as given in the papers upon which he was committed, and as gathered from the parties who brought him to the asylum, was that of acute delusional insanity, the direct effect of excessive drinking, that is acute alcoholism with delusions of ventriloquism, of having poison given to him, and being followed by his enemies. He claimed that these enemies got on to the same train with him and followed him to Topeka, and were hidden about the premises ready to maltreat him.

His general appearance and all physical symptoms confirmed this view of the case, and it was expected that as soon as his system had thoroughly recovered from its alcoholic condition, convalescence and cure would speedily follow. His bodily health rapidly improved, his nervous manifestations and tremulous symptoms disappeared, and in a comparatively short time he repudiated all his former delusions, emphatically and consistently. He talked rationally on every subject, and explained that his delusions had been caused by excessive drinking. The disappearance of his delusions, the regaining of his mental equilibrium, and his rapidly improving bodily health, convinced every one that he had recovered from his insanity. The day was set for him to go to his home, and he was informed of this decision.

A day or two before he was to leave he asked for a large sheet of paper and a large envelope, and was observed to be busily engaged in writing. He took his manuscript away when he left. His first stop on his way home was at Kansas City, distant about sixty miles, where he spent the night, and mailed to me the statement he had written at the asylum, after he had added a postscript at Kansas City in the morning. This communication is as follows:

To the Superintendents of the Insane Asylum:

GENTLEMEN—DEAR SIR: Allow me to return to you, gentlemen, my kind thanks for the kind treatment that I have received while under your charge. I shall ever hold this in grateful remembrance.

Before I leave this institution I wish to give you the true cause of my being placed under your charge—as you have for the last eleven weeks had your watchful eye on me, and during this time have become satisfied that I am of sound mind and competent to transact my business affairs—by the following explanation, to which I am at any time willing to subscribe my name and certify to same before a proper officer.

I hope you will give this your careful consideration, that in the event of my ever again being reduced to the same condition, and by the same means whereby this was brought about, that you will make it your especial duty to make a thorough investigation of the same and bring the parties to speedy retribution. I will not keep you from the truth.

Last December I was taken sick from dissipation, as I and all my friends supposed I had been drinking to excess, but, as I have since learned, it was not all to be attributed to drink, but to being drugged by these same parties for the purpose of robbing me of my money, and during my sickness, which was extended on account of not having proper care and attention. They prolonged my sickness until February or March, during which time I was put to a heavy expense and was robbed by the same parties that brought this about. Since that time I have been continually followed, and by use of poisonous drugs, administered both by day and by night, reduced to such a condition as to be unable to attend to any business, and by the most vile and unlawful means ever perpetrated on any living person in any civilized community, and the means whereby this was, and is to this writing, being carried on, is by certain methods thrown upon me, and during the nights it is kept up unceasingly, as there is a number of them and they relieve one another.

These are facts and you may think it incredible, but they had been at this for nine consecutive months previous to my being brought before a jury; for two weeks they had me so reduced as to be near ending my existence. On Friday night, before the Sunday the doctor took me to Independence, they used a drug by which they threw me in a spasm which came near ending my existence, and on the morning of Sunday they had me in such a state as not to be able to move, and in the afternoon they drove me over to Independence, eighteen miles.

You may think this is not true, that it would not be allowed.

Permit me to say in behalf of the people of Coffeyville that they did not understand my case or it would never have been allowed. My doctor was not aware of these actions and none knew my condition. I informed some parties previous to that time, but, alas, they were unwilling to give the same credit, and it is the same here.

You may wonder why I did not report these things. I did attempt to explain when I was first entered here, and found that it met with the same rebuke that it had from others before my admission, therefore I refrained from mentioning it, knowing that it would only prolong my stay; therefore, I have delayed until my release.

Gents, never again doubt my word; if I am ever brought here or to any other asylum, it will be through this same means unless by some unforeseen accident.

This talking or means of communication is done by continually talking in a whisper, or articulating by some means which I am unable to understand or explain; something the nature of ventriloquism; and, gentlemen, it was a long time before I could bring myself to believe this could be possible, but I have found it true. God protect anyone from learning or getting their ear broken to this, as it is the greatest curse that ever befell a person. If I should relate all or one-tenth part of my suffering and annoyance you could scarcely

bring yourself to believe it possible by such methods as they employ and means they devise. They have undoubtedly sent persons to asylums before this (my case), and it has, according to their reports, been in use for procuring money, and carried to such an extent as to cause death. For to substantiate I would call your attention to a peculiar smell and at times a very bad stench caused by these drugs of the dirtiest nature; also, if you notice, a number of patients as well as attendants in this ward are getting very nervous and the health generally is not very good. You think the stench arises from the water closet, but it is not all from there. Also, as regards myself when I was brought here, they, that is these parties, were on the same train. On a Sunday when in conversation with Doctor Eastman he noticed a nervousness and a trembling in my voice; it was because they had been using drugs. You also noticed me on the Saturday I was over to the city being flushed and nervous. You attributed this to excitement, but it was this drug they threw upon me. At services on Sunday they drug me, and you can discern a smell in the hot air during service.

I inclose you some of the sweepings from my room and you should have it analyzed. They are hidden around and hidden under this building. You will find them or traces of them around the flues connected with this hall.

Gentlemen, these are facts, and for the reputation of the institution I will not report it outside, but I propose to try and bring these parties to justice. In the meantime, I shall attend to my business, and after I have looked after that, I will be able to show to the people of Kansas one of the most vile and villainous crimes and methods of communicating them that has ever been known. Should they, in the meantime, attempt to follow me and continue in this business, I shall endeavor to protect myself; and if you can aid me or assist me in any way — which I think you can, for they have been here during the whole time that I have been here, and, if I mistake not, they have been around the cook-house and get their meals from this place. I think they pilfer and steal, and they do not leave here day or night.

Again I repeat that I have withheld this on account of your unbelief, but they are facts, as God is my judge.

Hoping that I may never again be placed under like circumstances, and that they may speedily be brought to justice, and that the reputation of the institution may not be tarnished, I am

Yours very respectfully,

(Signed)

C. B. C.

KANSAS CITY (P. S.)—These same parties were on the same train and are here and as noisy as ever. Should anything serious occur, you will know to what source to contribute it. I had hoped that I would not be annoyed with them, but it seems impossible to get away from them. They are after the little money I have, and, gents, you should give me your aid in bringing these parties to justice.

Hoping I may pass a quiet night, I will write to-morrow.

Yours,

(Signed)

C. B. C.

The samples of dirt, etc., from the room, which were to be analyzed, consisted simply of the ordinary dust and lint which would gather in a patient's bedroom.

Several other short letters, giving an account of the continued persecution by these parties, and threatening vengeance, were received within a week or two, but nothing more was heard from him till, in reply to questions addressed to his brother, under date of November 21, 1888, a little more than two years after his discharge, I was informed, "these manifestations which he experienced at intervals after leaving the asylum have entirely disappeared, and his mind has become entirely clear and rational, although his health has not been good, and extra work or exercise affects him mentally as well as physically, at least temporarily. He is trying to rest up this winter."

The wording of this letter from the brother shows that the patient was not thoroughly sound in mind, but it is remarkable that his delusions did not lead him to any overt act. Increasing dementia and entire freedom from active mental effort is doubtless the explanation of his passive state.

Subsequently I learned that this patient remained essentially about the same, but growing less and less active, mentally, until some kind of an apoplectiform attack caused his death about four years after his discharge from the asylum.

The special points of interest in this case are:

First. That acute alcoholism may be engrafted upon chronic delusional insanity, and the totality of symptoms may be mistaken for simple acute alcoholism.

Second. In such a case the cure of the acute alcoholism may lessen the intensity of the delusional insanity, but does not effect its cure.

Third. Such a patient may be sagacious enough to take advantage of the physician's diagnosis and simulate entire recovery by concealing his chronic delusions.

Fourth. The final outcome of this case shows the fundamental insanity to have been dependent upon chronic, progressive, incurable brain impairment; itself probably due to long-continued inebriety.

CHRONIC DELUSIONAL INSANITY OF SYSTEMATIC EVOLUTION.

(LE DÉLIRE CHRONIQUE À ÉVOLUTION SYSTÉMATIQUE.)

CONTINUED FROM JULY NUMBER.

LECTURE V.—THIRD PERIOD—MANIA OF GRANDEUR.

SUMMARY.—The manner in which the patients act under the influence of the insanity, flight, defensive attitudes, offensive and dangerous actions—Transformation of the mania of persecution into the mania of ambition and grandeur—Pinel, Morel, Foville, Magnan, Garnier, Gerente—Conditions necessary for the establishment of ambitious ideas—Causes of error in the diagnosis of the transformation.

Dissimulation of the patient (Falret)—Special nature of ideas of grandeur—Supernatural power (Camuset, Marandon de Montyel).

During the time when delusions of persecution seem most firmly rooted in the mind of the patient a very important change in the nature of the insane ideas takes place, ushering in the third stage of the disease or the period of grandeur. It has always been recognized that in certain cases of insanity delusions of persecution were frequently replaced by ambitious and grandiose conceptions. Therefore we frequently meet in medico-psychological literature with recorded cases in which such transformations have been observed. But the authors had not sufficiently recognized the significance of the metamorphoses, nor had any of them been led in consequence to describe a new clinical variety with systematic evolution such as we are now studying. In the early part of this century Pinel, under the heading, "Can melancholia after some years develop into mania?" described cases of insanity which, after a considerable period of time and owing to unknown causes, changed their whole mental disposition and took on an entirely new form of insanity. An old patient under my care for twelve years and who during the first eight years of that time only manifested the delusion that he was threatened with poison, in the eighth year suddenly became ambitious and stated that he was one of the greatest potentates in the world, equal to the Creator himself, and ruler of the universe. Spielman, in his treatise on the diagnosis of mental diseases (Vienna, 1855), notices this tendency of persecution maniacs toward the development of delusions of grandeur, and we find him in addition grouping together various clinical facts, such as that megalomania may follow mania or may be consecutive to melancholia. In the latter case the insanity is slowly and systematically evolved. Albert in his memoranda of Psychiatry (Bonn, 1855), states that such a metamorphosis of the patient's personality pre-

supposes the existence of melancholia or of mania and is never independently produced. Here we may recognize the influence of Griesinger with regard to the secondary systematized insanities. Morel, as we have previously observed, has in his treatise referred to the remarkable transformation which the feelings and the intelligence of hypochondriacs undergo, and it is the influence of the same change that produces such strange aberration of intellect as leads such patients to believe that they are exceptional and superhuman beings. Such forms of insanity characterized by insane conceptions, with overlearning, proud, and grandiose ideas, are generally secondary to the well-known neuropathic condition known as hypochondria.

But we must always remember that mania of persecution as understood by Morel includes clinical varieties totally different from the chronic insanity we are considering. Foville was really the first who clearly observed the transformation of persecution mania into the mania of grandeur, but as we have already referred to his important work on this subject at the beginning of these lectures we shall not again quote him. It is only necessary to bear in mind that although Foville had accurately studied the psychological method of the metamorphoses, he failed entirely to elucidate the chief differences that now enable us to distinguish between megalomania, hereditary degeneracy, and chronic progressive insanity.

In 1877 we observed for the first time this evolution in the course of the insanity of persecution, and M. P. Garnier about the same time wrote his well-known thesis on the subject. In 1883 Gerente described cases of stereotyped insanity, in whom an evolution and transformation of the mental state and delusional symptoms were easily demonstrated. He pointed out that the first stage was one of depression and painful self-introspection, followed by ideas of grandeur and finally by dementia. This work stimulated the investigation of a new clinical variety of insanity, but the author erroneously regarded hypochondria as the initiatory stage of the disease and failed to clearly distinguish chronic progressive insanity from the psychoses of the degenerate. Finally and as a conclusion to these historical reminiscences on the metamorphosis of this insanity, we shall refer the reader to our clinical lectures delivered between 1881 and 1890 and to the important discussion in the Société Médico-Psychologique which took place during the session 1887-88.

The development of ideas of grandeur in the course of chronic progressive insanity is not unparalleled in morbid psychology.

Ambitious ideas are also commonly met with in congenital insanity and in the hereditarily degenerate, as well as in cases where the mental level is gradually lowered *pari passu* with the progress of their mental malady. The last mentioned variety is exemplified by cases of chronic alcoholism, of general paralysis, recurrent or intermittent insanities, and anxious forms of melancholia where the appearance of ideas of grandeur is an indication that the patient has reached the ultimate phases of his diseased condition.

As M. Garnier has remarked, the transition from ideas of persecution to ideas of grandeur indicates a more profound departure from the actual and the probable. The intelligence then begins to lose its integrity, the resistance of the brain diminishes on account of age and the long duration of the insanity. Unaccustomed to the real world from which he has for many years lived apart, the patient is prepared to accept or imagine, as the case may be, the fact of a new personality. Under these conditions and with the aid of various psychological processes the transformation of the insanity of persecution into the insanity of grandeur is easily performed. The persecuted pariah becomes an illustrious, powerful personage, it may be head of a nation, demanding millions of money which are owing to him and claiming for himself infallible judgment and royal descent. One of our female patients declared that her persecutor, a priest, after many years changed his tactics, gave her £30,000,000, and made her an exalted personage in order that he himself might benefit by her influence. Another patient became ambitious at the end of fourteen years after the beginning of the disease, and confidently asserted that he was a son of Napoleon, and proprietor of the asylum, which he had as an inheritance from Henry IV. He called himself Soldier of Europe, Emperor Diplomatically. Some female patients term themselves daughters of Louis Philippe, nieces or god-daughters of the Sovereign Pontiff. The transition from ideas of persecution to ideas of ambition and grandeur often happens, as Foville remarks, as a result of logical deduction. The patients imagine that since they have been unintermittently tormented for many years, so much envied, so intensely detested, they must be people of no small importance. A female patient, after complaining that her brain was paralyzed, and that she was deprived of her mental faculties, exclaimed one day, "If I were less intelligent, I should not have been so afflicted. They have sold my birthright for 15,000 francs, my character for 45,000 francs, and they steal my thoughts to write a book with." We have elsewhere

pointed out that the constituent elements of an ambitious insanity are contained in the mania of persecution. The subjects discover for themselves that they are of distinguished origin, or that they possess supernatural faculties, and look upon their own families as merely the families of their adoption, while they are descended from sovereigns, and are born to inherit immense sums of money. M. Marandon de Montyel states that we must attribute the metamorphosis of the insanity not to a process of logical deduction, but to the antecedent character and mental disposition of the patient, which may be briefly summed up in the two words, pride and suspicion. The reciprocal reaction during the period of persecution and the inherent feelings of pride are in themselves sufficient, quite unconsciously on the part of the patient, to produce megalomania. In certain cases an hallucination suddenly produces the ambitious idea. A female patient one day heard herself called "Queen of France." A man whose case is recorded by M. Briant, while walking out of a café heard himself saluted by the name "Napoleon." After having been persecuted for many years, a woman confidentially informed us that she heard the voice of God saying, "All that thou wilt say shall take place." All at once she imagined that she was a prophetess, and from that day her language, her manners, and her gestures completely changed.

It is worthy of notice that for a considerable period of time the patient resists his sensorial suggestions; even distinct hallucinations of hearing leading up to the formation of ambitious ideas do not bring conviction with them. Dr. Camuset does not believe that either logical deduction or accidental causative coincidences are sufficient to transform the mental disposition and recast the character of the ideas of a patient laboring under chronic progressive mania. He regards it as impossible that a persecution mania can, by any process of argumentation however specious, be converted to the mania of grandeur, or that any accidental concatenation of circumstances can bring about this result until the brain of the patient is ripe for the reception of ambitious ideas. We are quite in accord with the statement that hallucinations of hearing are incapable by themselves of producing ambitious mania, and further, we agree with M. Garnier's opinion that the process of transformation from the one mental state to the other is a slow and gradual one, and that the sensory affections simply act as determining factors in its formation. "The hallucination is the result of excitation provoked by the influence of the underlying basis of

disordered reasoning, and slowly leads the patient to an interpretation which is in accord with the current of his whole being." Sometimes again the transformation of the insanity takes place suddenly and spontaneously and without the possibility of assigning any known cause for its occurrence. The soil of the patient's mind seems to have all at once become ripe for the growth of ambitious ideas and he passively acquiesces in the change. In those cases where the metamorphosis of the insanity is originally intellectual, the character of the sensory disorders are harmonious with the freshly developed ambitious ideas. Besides abusive epithets and the strident voices of devils there are now heard voices consoling and comforting the patient, and promising indemnifying rewards for the trials that have been endured, and in this way largely contributing to the systematization of the ambitious mania. In some cases of bilateral hallucinations of a different character on each side the painful hallucinations, at first very numerous in the "persecuted" ear, tend to diminish in number and intensity with the advance in the transformation of the insanity, and the hallucinations in the ambitious ear increase in the same ratio. Ideas of persecution persist side by side with those of grandeur for very various periods of time. M. Falret considers that the latter ideas are merely superadded and do not affect or change the groundwork of the disease, which remains the same. We can not accept such an opinion, but on the contrary believe that a complete metamorphosis of the whole insane conceptions, together with a modification of the whole clinical aspect of the affection, takes place. The mania of persecution becomes gradually weaker—indeed the patient himself repudiates his former beliefs—and the mania of grandeur supplants it, producing a complete change in the subject's personality. The fact that the mania of grandeur invades the mind at the very time when the intelligence is losing its integrity is sufficiently ominous and significant. While the mania proceeds and becomes systematized it at the same time tends to become circumscribed. The patient perfects his special vocabulary, made up of neologisms, and is often most incomprehensible and puzzling to others. His insane ideas are always enunciated in the same stereotyped manner, and frequently extraordinary gestures and bodily postures or movements are adopted which remain connected with the fixed ideas, and always invariable and unaltered. In the course of the discussion on chronic progressive insanity in the Medico-Psychological Society of Paris some very interesting remarks

and criticisms were made, some of which we intend to refer to here, for they serve the purpose of answering certain objections and of cautioning us against certain fallacies.

The metamorphosis of the insanity is not always apparent, and the megalomaniac taught by his former experiences is not necessarily expansive in his mania, but may conceal his delusions of grandeur and riches. There are always some cases in which the transformation we allude to might remain unnoticed were it not carefully looked for. MM. Falret and Doutrebente strongly insist on the fact that it is of the greatest importance to know that dissimulation and concealment of insane ambitious conceptions frequently occur. M. Falret writes as follows: "For a very long time I have recognized the existence of the mania of pride and grandeur in many cases of persecution mania. Even in cases that I have had intimately under observation for many years I only recently ascertained that delusions of pride and grandeur had been concealed by them for a long time. Often an accidental circumstance or a haphazard word is sufficient to reveal to the physician the presence of these delusions." MM. Marandon de Montyel and Camuset drew attention to another source of error which may cause us to overlook the transformation of the patient's mental disposition. It is by no means essential to the diagnosis of a case of megalomania that the patient should proclaim himself to be a divine or royal personage. The disappearance of painful hallucinations, an apparent optimism and self-conceit, a conviction that he is endowed with powers or qualities proper to himself alone, are sufficient indications of a change in the character of the insanity, and of a complete transformation in the personality of the subject.

This new stage in the disease can not by any means be confounded with the period of persecution. As an example of the clinical aspect of this stage of chronic progressive mania we shall take the case of a woman who, in the early part of the ambitious period, when sensory disorders were still very active, imagined that she was endowed with supernatural power. She retaliated upon her persecutors and by concentrated thought crushed them. She stuck a knife into the head of a young man who she said had inoculated her, saying, at the same time, "I put into your head a red-hot iron which shall destroy your children till the fourth generation." With certain reservations it may truly be said that the ambitious period of the disease, with its characteristic altitude and manner, is frequently met with outside asylums. Complaints and

recriminations cease with the sensory disorders which provoke them. The patient assumes an attitude of lofty contempt for his surroundings. He may smile ironically, refuse to shake hands, be disdainfully silent, or burst out laughing when spoken to. If at last he condescends to speak he may confess that formerly he was maliciously pursued, but that now he is completely free to go out and in as he pleases, that every door is opened wide for him, and that he is owner of the asylum in which he is placed. In some other cases a painful hallucination from time to time reappears as an awakened echo of the former miseries, but the patient pays no attention to it. As in the period of persecution, so now everything is interpreted according to the prevailing mental convictions. They explain that if they still hear prodigiously distant voices it is because they are endowed with exceptional powers of hearing. They sometimes perform acts strictly in keeping with the supposed exercise of an imaginary supernatural power. One patient opens and shuts his mouth under the belief that he is crushing and swallowing his enemies. A female patient is in the habit of pressing her forefinger against her head, in the belief that she thereby expels from her brain strange personalities who are attempting to get inside.

LECTURE VI.

SUMMARY.—The method of the metamorphosis of the disease. (1.) Logical deduction. (2.) Hallucinations. (3.) Spontaneous transformation—Changing nature of the hallucinations—Variation of the character of the mental manifestations according to the social position and education of the patient—Manifestation of the insanity in the middle ages: demoniacal possession, theomania—Manifestation in modern times: electricity, hypnotism, telephones, megalomania—Possible co-existence of both aspects of the insanity—Importance of the evolution of the disease—Period of dementia—Influence of the *vesania* and old age on the progressive course of the disease.

We have now seen the general characteristics and sketched the evolution of chronic progressive insanity, but we have yet to observe the varieties of its manifestations according to the age in which the disease is observed and according to the religious beliefs, education, social level, and ordinary occupation of the patient. The patient builds up his insanity in the midst of varying circumstances and modifies and colors it according to his own individuality. When we turn to the middle ages we recognize in the actions and sayings of the insane the influence of the superstitious tenets and beliefs of that time, while in modern times we see insanity availing itself of the inventions of physical science and the progress of the arts and borrowing from the political struggles and social organizations in order to embody its morbid beliefs and express them in words.

Toward the end of the middle ages and at the time of the Renaissance, the delusions of the insane chiefly partook of a belief in witchcraft and demoniacal possession; in the eighteenth century mesmerism, magnetic fluid, and later on spirit-rapping and table-turning, were commonly referred to by the insane as agencies to account for their morbid sensations. The delusions of the insane are thus merely the reflex or shadow of the prevailing beliefs of the age in which they live. In our day the marvelous in former ages has been replaced by the great natural forces, such as electricity, chemistry, hypnotism, and microbes, as well as by other less important scientific and industrial discoveries.

In the same manner in former times while a patient with grandiose delusions styled himself the Divine Being, Antichrist, Joan of Arc, or one of the prophets, they now become emperors, kings, presidents of republics, reformers, or inventors.

Some patients exhibit a mixed insanity composed partly of beliefs of an older period which they have imbibed with their early education and partly of beliefs in the interference in their case of one or more of the forces of nature revealed by modern scientific methods.

The clinician who is engaged in watching the transformation of ideas of persecution into ideas of grandeur must not be deceived by the varying aspect of the insane conceptions. The important fact to be considered is not the character of the delusions, but the evolution of the disease itself. Case of Madam H.: Her father attempted to commit suicide and her mother was affected with hemiplegia. She was reared in a village and as a child was docile, industrious, and quick at learning. She was from an early period trained to household work and in the winter evenings used to meet with others in a large kitchen, where sewing and spinning were engaged in by the women, and stories of sorcerers, witches, and ghosts formed the ordinary matter of conversation. In 1865 she married and came to reside in Paris. In the first few years of married life she gave birth to two children, neither of the labors being difficult or attended by accident. Nothing extraordinary was observed about her until the year 1878, when she was thirty-three years old, when it was noticed that she used occasionally to become depressed, anxious, irritable, fond of solitude, and ate very little. Following such an attack of depression was a return to her usual habits of industry, regularity, and household work, but on the whole with diminished energy and cheerfulness. She seemed preoccupied, suspicious, and cold in her manner toward acquaintances with whom she had formerly been on good terms. By and by she explained to her family the cause of her unhappiness, which was that unknown persons in the streets slandered her and reproached her for many failings. She declared that she was insulted by persons who concealed themselves about the house, but whom she failed to discover. When her husband assured her that all these things were imaginary she became irritated. She used to say, "Don't you hear them calling me Eve and Venus and dragging my name in the dirt? the Jesuits bear an ill will toward me." She told how one evening she put away in the cupboard an image of Piety, which had been given to one of her daughters. Soon afterward she heard it moan like an animal and knock at the cupboard door. The knocks penetrated to her heart and to her daughter's heart, who began to cough violently. She seized the image, tore it to pieces, and threw it out

of the window. Suddenly the gas in the streets went out. She heard repeated railway whistles and dreaded some catastrophe. She also believed that the railway station lights had gone out; that there would happen some terrible railway accident, of which she was the unfortunate cause. She tried to strike matches, but they refused to light. In utter helplessness, she commended herself to the Holy Ghost, when all at once the match strikes, the gas relights, and the alarm whistles cease. Shortly after this she attributed all her troubles and auditory hallucinations to telephonic agencies, for in the Parisian social class to which she belonged modern inventions and social progress are regarded as synonymous terms. Each of her thoughts and ideas were transmitted by telephone. She was acted on by electricity and was annoyed by smells of sulphur and of burning. On account of the influence of her delusions, she refused to go outside or to leave her household work. She often got up during the night and threw water on her imaginary tormentors. One day, exasperated by insults, she ran down-stairs armed with a broom handle, striking freely about her and putting the landlord and those of the tenants who came in her way, to flight. On another occasion she flourished a meat chopper and threatened to kill her neighbors. In 1883 she began to develop ambitious ideas which equally reflected the two social environments in which she passed her life. On the one hand she declared that she was martyred because she was rich and powerful in the grace of God and had been made empress of the world. She stated that she possessed the gift of miracles and that she could overcome all obstacles. On the other hand, she believes that she ought to govern the country, manage the affairs of State, and be president of the republic. This case shows the combination of the two forms of delusion, one form being founded upon modern and scientific notions. We can not emphasize the point too often, that what is of most importance for the clinical observer to notice, is not the variations in the character of the different delusions, but the evolution of the disease; the change, for instance, from demoniac possession into theomania, from persecution mania into megalomania.

This progressive course from depressed to ambitious ideas renders the prognosis of the case very unfavorable, for having once become ambitious, the patient may be regarded as incurable, and as, more or less, slowly passing into dementia.

The advent of the period of grandeur is the first symptom of the commencement of enfeebled cerebral resistance, ultimately ending

in absolute dementia. The mental level is lowered by degrees; the recollection of the various events of the previous period of insanity becomes obliterated; the intellectual activity is absorbed in the incessant repetition of stereotyped insane phrases, and the conceptions formed of the external world are confused. While the patient's interest in surrounding things and persons is very slight, his mind may be frequently stimulated into activity by means of tonal cortical images, formed under the influence of hallucinations. They often adopt fixed attitudes, standing apart and alone, and speak to themselves in a low voice, or make gestures corresponding to their prevailing delusions. When questioned, they do not generally answer at first, and if the question is repeated and an answer demanded, they appear as if astonished and reply evasively and unsatisfactorily. Their language is interspersed with neologisms and special phrases, which renders it almost incomprehensible. It may be observed that, as the weakening of the mental faculties progresses, some of the ambitious ideas are left out, the voices cease to be credible to the patient, and his convictions may easily be shaken, and even made to disappear altogether. M. Falret, while admitting that, toward the end of the ambitious period, the intelligence of such patients becomes slowly and progressively clouded, and that their insane ideas become more and more confused and complex, refuses to acknowledge the existence of a period of dementia.

It is true that, after twenty or thirty years, some of these patients can converse rationally on subjects unconnected with their insanity, but in others the general intellectual level is perceptibly lowered. To the action of the psychosis in producing mental deterioration must be frequently added the intellectual decay accompanying advancing years. Chronic progressive insanity is a disease that commences after maturity, and its course extends over such long periods as twenty, thirty, and even forty years. It may then be taken for granted that when the patient arrives at the last period of his malady, senile cerebral lesions, due to atheroma of the blood-vessels, often supervene, and, as a result of such senile changes, there occur decay of memory, increased emotionalism and confusion of ideas. Therefore, the intellectual faculties become, from day to day, more disintegrated under the combined influence of the progressive course of the insanity and the nutritive disorders occurring in the cerebral cortex. Griesinger long ago drew attention to the mental weakening which marks the terminal stages

of systematized insanity. "In the last stages," he says, "we find few ideas remaining, and these of a stereotyped character; the moral and intellectual energy is diminished, and a general decrepitude overshadows the patient, who manifests only the wreck of his former mental faculties." Baillarger says, "It can not be doubted that, after a longer or shorter time, systematized insanities often end in dementia. Long before this happens many patients show symptoms of intellectual weakness." Schüle, while studying the manner in which persecution mania is complicated by megalomania, observes that, with increasing psychical weakness, ambitious ideas begin to prevail, and that the advent of these symptoms indicates approaching mental decay. Upon the whole, therefore, it must be generally acknowledged that, after the period of grandeur in chronic progressive insanity, there sets in an actual dissolution of the intelligence, strongly in contrast with the previous mental state of the patient. This is yet another aspect of the disease, which may be termed dementia in the sense that it implies a condition of intellectual decline.

LECTURE VII.

SUMMARY.—Degenerative and other insanities — Melancholic states — Delusions of enormity — Subacute alcoholism — Co-existence of alcoholic insanity with chronic progressive insanity — Ideas of persecution in general paralysis and in senile insanity—Acute hallucinatory forms of insanity — The common mental conditions of the degenerate — Paroxysmal mania in the degenerate.

We have now described the course of the four periods of chronic progressive mania, and we shall proceed to review some clinical forms of insanity which resemble that disease in many particulars. We shall briefly refer to states of mental depression, hallucinatory states, and the delusions of persecution met with in epilepsy, general paralysis, and other forms of insanity.

Melancholia is distinguished from chronic progressive mania by the marked mental depression; by the primordial coenesthetic pain, which constitutes the most essential element of the disease; by the existence of ideas of guilt and ruin, by the minor part played by sensory disorders in the majority of the cases, and by the existence of somatic phenomena. The beginning, progress, duration, and termination of the two diseases are distinct and different. The melancholic patient is self-accusatory, but the persecuted maniac poses as a victim; the former with resignation undergoes and even freely asks for punishment; the latter resents and rebels against persecution. The thoughts of the one are occupied chiefly with ideas on suicide; the other, as a rule, vigorously sticks to life. In melancholia the disease is secondary and consecutive to the implication of the affective condition; in chronic progressive mania it is essential and primary. The genesis of the ideas of persecution and of the hallucinations are different in both diseases. In melancholia they are merely the echo of the most painful and innermost workings of the patient's mind, while in progressive insanity they appear with a suddenness that surprises the patient and draws forth protestations from him. In melancholia the fears of the patient are for the future, and the impending troubles that are in store for him, while in chronic progressive insanity, on the other hand, the patient's thoughts are chiefly occupied with the past or the present.

Cotard, in his study of the development of chronic melancholia, showed that at a more or less advanced period of the affection, there occurs an insanity of negation and annihilation, the antipodal

condition to the grandiose insanity of chronic progressive insanity. The subjects of this form of melancholia deny every possible advantage and connection belonging to them; everything is destroyed; nothing exists for them neither here or hereafter. Occasionally they manifest a form of pseudo-megalomania, characterized by ideas of immortality or immensity. Cotard noticed this condition and called it *delire enorme* to distinguish it from *delire grand*.

The patients are not only infinite in time, but also in space. Formerly they despised themselves and called themselves nothing; now there may be no limit to their greatness. This latter symptom, instead of marking a rebound from the former state of chronic depression, is a sign that the disease has attained its maximum state of development. In some very chronic cases *le delire enorme* may end in ideas of grandeur, always, however, tinged with melancholia. It will readily be seen that it must be impossible to confound this form of insanity with progressive insanity, for the general features and the symptoms of the two affections are distinct from one another. Acute or subacute alcoholic insanity can not easily be confused with progressive insanity, though in both forms of alcoholism and in toxic insanities generally hallucinations and illusions of sight constitute the most prominent symptoms; yet in progressive insanity auditory hallucinations are chiefly met with. Again, it must be pointed out that alcoholic patients live in a state of constant fear, even terror, while the patients we are now studying are, as Lasègue puts it, pursued by depressing ideas, but quite free from terror; indeed it may be said that they have no fear, having long ago become accustomed to the tyranny of their delusions. In the case of the former, morbid subjective sensations are incessantly produced; the patient takes them up and abandons them by turns. The disordered consciousness and the confused state of perception give rise to the production of a succession of changing mental pictures. In the latter disease hallucinations are exactly defined, precisely perceived, and analyzed by a clear intelligence.

The persecuted patient listens with passive attention to the threatening and injurious statements of his imaginary enemies, while the alcoholic patient, on the other hand, argues with the voices which alarm him, obstinately waits for replies to the questions he has put to them, and searches and asks for information. Such voices usually take the form of reproaches, insults, moans, which appear so irregularly and rapidly as not to give the patient time to concentrate his mind upon any one subject before

another takes its place. He may hear a voice informing him that he is to be burnt, followed by ringing of bells, noise of machinery, confused screams or songs. These hallucinatory phenomena have no resemblance to the systematized hallucinatory condition met with in chronic progressive insanity, where, instead of confusion, there is often rigorous unilateral coördination. We may also compare the sudden onset, the brief course, and the curability of the toxic insanities, with the indefinite duration of the chronic progressive insanity; also the sleeplessness, the digestive disorders, and the muscular tremors of the former with the absence of all somatic symptoms in the latter disease. Finally, after the acute attack in the alcoholic, predisposed by psychopathic inheritance or by weakened brain power, the characteristic symptoms tend to persist, accompanied by auditory and olfactory hallucinations and disorders of general sensibility, all of which very slowly disappear. For a long time the patient remains positively convinced of the reality of his delusions and hallucinations. The simple alcoholic, on the other hand, is easily persuaded, after a few day's abstinence, of the unreal and imaginary nature of his sensations.

In those cases in which alcoholism is superadded to the degenerate constitution the incidence of the alcoholic attack is accompanied by more or less systematized ideas of persecution. One of our patients, a club waiter of continued intemperate habits, who was secluded on account of an attack of acute alcoholic delirium, presented, at first, manifold delusions, produced by varying hallucinations of battles, bloody corpses, conflagrations, etc. In a few days he became quiet and orderly, but had hallucinations of hearing; he heard voices accusing him of the murder of a woman, and he imagined that he was being made drowsy by the constant administration of drugs; that he was receiving drugs for the purpose of making him insane; he spoke to no one because he believed that he was looked upon as a murderer and that he was destined to be burnt alive. He mistook the identity of those around him and did not know where he was. He frequently attempted to commit suicide so as to escape from impending torments. It is not necessary to dwell upon other differential symptoms, such as the confusion of ideas, the imperfect systematization of the insanity or its sudden appearance, under the influence of alcoholic excess, all of which are entirely different from what is usually met with in chronic progressive insanity.

There has been described above a typical case of chronic pro-

gressive insanity, freed from all modifying or accidental symptoms. But it should be borne in mind that in the course of the disease there may occur melancholic episodes or fits of maniacal excitement, with increased activity of the sensory disorders and delusions. Finally, alcoholic insanity may be met with in the same individual, side by side with chronic progressive insanity. The toxic agent (alcohol) increases the intensity of the sensory disorders, giving rise to hallucinations of sight and causing dangerous conduct on the part of the subject, and occasionally in the early stages transiently masking the pre-existing insanity and rendering diagnosis extremely difficult. In a few cases where chronic progressive insanity, alcoholism, and epilepsy co-exist, the diagnosis is still more obscure, for each disease imparts its own characteristic mental tinge. We need hardly refer to the ideas of persecution and of grandeur that appear in the course of general paralysis, for they bear no resemblance to the same symptoms in the disease we are considering. The ambitious ideas in general paralysis are incoherent, numerous, extravagant, and childish, and in no sense systematized or logically coördinate. As to ideas of persecution in the disease, they may be concomitant with hallucinations of hearing, disorders of general sensibility, or fears of poisoning. Moreover, a general mental weakness and mental facility may be observed underlying the confused insanity of general paralysis.

The ideas are emitted as they occur, no account being taken by the patient of what he has previously said or is going to say next. In the ataxic forms of this disease, which most frequently occur in subjects with a nervous inheritance, there often appear delusions of persecution produced and maintained by disorders of sensation having their origin in the diseased cerebro-spinal condition, but the vague persecutory ideas have no evolutionary progress. The same thing applies to the persecutory ideas met with in the various motor paralysis, such as that of epilepsy, senile insanity, or paralytic insanity.

In the foregoing diseases the delusions of persecution are almost always accompanied by hallucinations of hearing, but scarcely ever by any other form of sensory disorder. They often begin suddenly and are frequently recovered from. Upon the whole, and in spite of superficial resemblances, all badly systematized and secondary and episodal delusions are vastly different from those observed in the mental condition of the patient in chronic progressive insanity. The commencement and progress of the insanity and of the sensory disorders are all in themselves sufficiently characteristic.

The acute hallucinatory forms of insanity (*Hallucinatorischer Wahnsinn*, Krafft-Ebing; *Amentia*; *Hallucinatorische Verwirrtheit*, Weynert), which are essentially characterized by the excitation of the sensory centers in an exhausted brain are marked by the absence of or by very slight systematization and by the profound disorder of a consciousness invaded by numerous hallucinations. The insanity being, so to speak, located in the special sense areas, there is no question of delusions being logically deducted. The morbid mental phenomena appear at random, the patient is deluded by his senses and loses consciousness of time, of locality, and of his relations with the external world. This form of mental disease is easily distinguished from chronic progressive insanity by its paroxysmal beginning, the circumstances of its origin (for example, the insanity of prisoners, post febrile and puerperal insanity).

Westphal and Schüle describe them under the name of acute paranoia and acute *verrücktheit*, to indicate that they regard them as modifications of chronic paranoia and chronic *verrücktheit*, in which intense disorders of consciousness, caused by the multiplicity of the hallucinations prevail. We agree with Krafft-Ebing and Kraepelin in thinking that the acute forms may be entirely separated from the chronic hallucinatory forms.

The acute forms of hallucinatory insanity have nothing in common with systematized and generalized insanity, and they never become systematized. The hallucinatory insanities have been, recently, very thoroughly studied in Russia by MM. Rosenbach and Korsakoff. They propose the word *dysnoia* (insanity with mental confusion) as a suitable descriptive term for psychoses of this kind, but we shall not further pursue the subject of such acute hallucinatory forms, which may be frequently classed among the suddenly occurring insanities of the degenerate.

We must now differentiate the systematized psychoses of the degenerate from chronic progressive insanity, and it may be useful if we briefly sketch the general characters of that great group of psychical maladies and some of its special features.

The neuropathic or psychopathic defects of progenitors is generally acknowledged to be the primary cause of the degenerate state. In many instances it owes its origin to a transitory state of the parents at the moment of conception (drunkenness, for example), or to one of the many affections incidental to foetal or infantile life. Such deviations from the normal type are characterized by some anomaly in the development of the cerebro-spinal axis, which

reacts upon the psychical life of the individual. The great majority of the degenerate manifest the various somatic deformities which are indicative of race decay. Such deformities, which are known as "physical stigmata," include malformations of the skull, limbs, face, and genital organs.

The psychical defects may be divided into four classes, namely: Idiots, who manifest no psychical life; imbeciles, capable of being slightly educated, but unable, without supervision, of directing or of taking care of themselves; the mentally debilitated, deficient in cerebral power, but capable of development under certain ascertained conditions; the superior degenerates, in whom are apparent intellectual gaps and imperfections of the moral sense as well as emotional disorders. The last named frequently are possessed of brilliant mental endowments. The distance between the extreme ends of the degenerate condition is wide enough, but it is spanned by almost insensible gradation, every subject forming a link in the chain and bearing the undoubted stamp that he belongs to the great family of the degenerate. The test of degeneracy is the imperfect development of one or other of the mental faculties, the hypertrophy of some one propensity, an imperfection in the moral sense, or the subjugation of the will to some instinctive impulse which is being constantly struggled against. The clinical aspects of these cases are infinite in their variety, according to the seat and extent of the defects in cerebral development. We meet here with the various kinds of impulses, obsessions, dipsomania, onomatomania, insanity of doubt, mania of touch, kleptomania, pyromania, homicidal and suicidal impulses, and sexual perversion.

These disorders, which arise from imperfect equilibrium between the various centers of the cerebro-spinal axis, are commonly characterized by irresistible impulse, accompanied by mental anguish, a complete consciousness of the condition, and a feeling of relief and satisfaction when the act has been committed. These episodal syndromata of nervous degeneracy must not be regarded as morbid clinical entities, but as symptoms of an underlying condition of mental disequilibrium. They form the psychical stigmata, which are of much greater importance than the physical.

The hereditarily degenerate require only the necessary external conditions to render them insane. The more common of these conditions are continued fevers and moral shocks, and in women the commencement of the catamenia, suppression of the menses, pregnancy, and nursing. The nervous systems of such persons are pecu-

liarily susceptible to the action of toxic agents, and after a first attack they manifest a cerebral predisposition to succumb to their influence.

They are also unable to subdue their desire for nerve stimulants and narcotics, such as morphia and alcohol. The insane manifestations of the degenerate are highly characteristic. The insanity may supervene in youth or even in infancy; it often occurs with remarkable suddenness; there is an absence of progressive evolution or of systematization of the delusions, or if systematization exists at all it is very imperfect. Another great feature of this insanity is its polymorphism and the frequency with which it is recovered from; occasionally it appears as a short acute attack and at other times in a prolonged and indefinite form. If this brief sketch of the insanity of the degenerate is compared with the previous description of chronic progressive insanity, the distinction between the two forms of mental alienation is apparent in the patients themselves, in their hereditary history, their previous mental condition, the period of life at which the insanity appears, its inception and its prognosis. We shall now glance at the forms of psychoses which develop among the degenerate.

LECTURE VIII.—THE DEGENERATE.

SUMMARY.—Persecution mania (*les persecutés-persecuteurs*)—The overpowering and polymorphous character of their insane conceptions—The general absence of hallucinations and the progressive nature of the disease—The frequently violent actions of the patients—The possibility of sudden recovery.

Persecution maniacs, who manifest active aggressive attitudes toward others (*les persecutés-persecuteurs*), show strong clinical signs of belonging to the class of the degenerate. They are at the same time moral maniacs and reasoning maniacs. The reasoning mania of these people is further distinguished from the maniacal attacks of the ordinary degenerate in that it is not a special disease, but simply an unconscious exaltation of the intellectual faculties. An increase in the degree of cerebral disequilibrium is accompanied by mental excitement without any want of mental lucidity. They manifest at the same time an indefatigable activity and effervescence of spirit, which leads them to undertake a thousand enterprising schemes and permits them to accomplish an extraordinary amount of work with comparative ease. Their wonderful brightness of memory and imagination, and the facility with which their ideas become associated, tend to produce a host of conceptions and designs that reflection and attention fail to correct and sift. The degenerate frequently manifest moral insanity or an exaggeration of either the intellectual or the moral faculties. The true moral maniac has no true conception of the meaning of the terms justice, honesty, friendship, virtue, the only rule of his conduct being the gratification of one or other of his perverse propensities. The persecuted persecutors take after the reasoning maniacs in their manifestations of indefatigable activity, and they resemble the morally insane in their absence of the moral sense. Their chief characteristic, however, is the morbid fury they display toward their imaginary enemies. Such persons may all their lives maintain a resentful attitude and pose as the victims of some imaginary injustice, and will in consequence frequently behave outrageously and recklessly. We are generally able to discover in them a marked hereditary taint, the physical stigmata of degeneracy, and from youth or infancy we can generally trace the presence of a want of harmony between their various mental faculties. To this want of equilibrium must further be added the predominant influence of many passions and appetites. Cunning, untruthful, revengeful, and relentless,

they prostitute all their mental powers to the gratification of their morbid desires and their deep hatred. They demand that certain prejudices, which they believe exist against them, should be removed; they accuse justice which denies their suit of being perverted, and they call aloud for the restoration of their maliciously damaged reputation. At first their speeches and claims appear to be only passionate, but as their excitement increases their desire to see their cause triumph knows no bounds and overpowers their feelings, ideas, and will. Then it is that the insanity in their character manifests itself openly. It can no longer be regarded as a passing passion, a legitimate claim, or a just offense at outraged judicial rights, but must be looked upon as a true obsession by a dominant idea, under the influence of which the individual will sacrifice his fortune, his family, and even his liberty. From a comparatively true but inordinately amplified basis of fact, with a thirst for vengeance and openly courting scandal, they press their claims with unremitting tenacity. In a prolix and loquacious fashion, and in an apparently legal and logical manner, they accumulate their so-called proofs, with many superfluous and imaginary addenda. They thus deceive themselves and others and mystify the difference between truth and error. They rapidly approach conclusions without any prolonged deliberation. Like persons laboring under chronic progressive insanity, they appeal to legal tribunals and to influential personages; they commence lawsuits, write to the newspapers, and petition parliament. They are by no means discouraged by successive repulses and are confirmed in their insane purpose by the advent of new imaginary stimuli. They live in a permanent state of mental excitement, the outcome of which is a series of defamatory libels and insulting letters and threats which ultimately attract the notice of the judicial authorities.

They are sharply distinguished from persons laboring under chronic progressive insanity by the absence of sensory disorders.

Hallucinations are the exception in such cases, and when they exist they do not exhibit that progressive evolution from the word unit to monologue and from monologue to dialogue, which latter is the mental echo of the thoughts of the subject. In some instances the diagnosis may be puzzling, as where, for example, a reasoning maniac presents hallucinations of hearing; or again where, in a recent case of chronic progressive insanity, the patient conceals his hallucinations and his mental attitude toward his surroundings. Persecution mania shows no progression or metamorphosis of the

insanity; its subjects remain always the same, proud, reserved, and persecuted, and the disease has no stages similar to the negative and active stages of chronic progressive insanity.

The history of a case of persecution mania is really the life history of the patient. And generally there will be found to exist some hereditary predisposition, as evidenced by physical stigmata, or an inquiry into the personal history of the case may reveal some previous want of psychical equilibrium, intellectual gaps or perversions of temper. In chronic progressive insanity, on the other hand, the present state of mental disturbance is a violent contrast to the previous mental history of the case. Finally, in persecution mania the insanity appears early, and may be indefinitely prolonged without ever reaching the stage of dementia. Occasionally such accidental pathological changes as apoplexy may supervene and abruptly terminate the course of the disease, but complications of this kind are less frequent than was formerly supposed. The reasoning maniac may, more easily than the subject of chronic progressive insanity, communicate his form of delusions to those who live with him. He is the self-elected defender of truth and has fought and resisted tribunals, authorities, and doctors. His attitude of a much oppressed individual not yet crushed by adversity conquers the sympathies and arouses the compassion of many people, and while the chronic progressive maniac merely communicates his wrongs to his own relatives and friends, the persecution maniac finds sympathizers among the general public and in the columns of the press. Persecution maniacs have been divided into several classes, according to their morbid tendencies. First of all there are what may be termed processive or litigious maniacs (*paranoia querulens* of the Germans), who do not, as a rule, resort to violent means of asserting their rights, but constantly frequent the courts of justice. They make themselves intimately acquainted with all parts of the law that can be construed into bearing upon their own cause; they exhaust every form of legal proceeding and are never discouraged by repulses. One such case, the son of an insane father, eccentric from his youth, who was sent to the asylum on account of delusions of persecution with transitory hallucinations of hearing, attributed his incarceration to the malign influence of the gentlemen of the bar, who wished to "drown his voice and dishonor him!" Whenever he regained his liberty he undertook legal proceedings and very soon exhausted the patience and the resources of every administrative and judicial authority to whom he could obtain admission.

He raised innumerable actions against the physicians who certified him and requested them to meet him on public platforms. He petitioned both Houses of the Legislature for a restoration of his rights, and for reparation both for loss of character and for injury to feelings, and claimed assistance to enable him to prosecute the certifying doctors criminally. Many other patients of this class are of a more violent disposition, and are frequently convicted for personally insulting, threatening, or assaulting individuals. Such cases soon tire of taking legal proceedings for the redress of their wrongs, and speedily resort to the posting of libelous statements on monuments and buildings in public places; they do not hesitate to assault their enemies openly and may not stick at the commission of homicide. The following case, in which there was an attempt to murder a high public functionary, exemplifies the difference between this form of affection and chronic progressive insanity. The patient was intelligent and active, but always showed evidence of being mentally unstable and ill-balanced. He lived by his wits, and deceived many people by the number and variety of the new and plausible expedients he was constantly adopting. He posed variously and at different periods as a filemaker, a milliner, a chemist, a manufacturer of explosive substances which no fortress could resist, a poet, a compiler of a dictionary of synonyms and a pamphleteer. Notwithstanding all this display of energy, rendered still more unprofitable than it otherwise might have been by his mental instability, he lived a life of miserable poverty. Whenever he landed himself in a more than ordinarily difficult position, he laid the blame of his embarrassment upon the leaders of the Government. When he failed to obtain any redress he gave way to paroxysms of uncontrollable excitement. At this time, when exhausted by overwork and starvation, and when uttering homicidal threats against high legal officials, he was impelled by the sharp polemics of the press to enter the political arena. In so doing he is actuated by the idea of revenge upon his enemies. All whom he has a grudge against, all whom he regards as noxious to the welfare of his country, more especially those who have incurred his displeasure, are to be annihilated. He drew up a black-list of victims in four categories, arranged according to their guilt. Out of this list nineteen were chosen for punishment. Three were sentenced to death (two of these were political offenders and one a personal enemy), four were condemned to receive serious wounds, seven were to be more or less grievously mutilated, and five were to be slightly

afflicted. As it was necessary that one victim should die for all the others, each offender on the list received a number, and lots were cast and the victim selected in that way. His diary, written at this period, shows his state of intellectual exaltation and excitement. The following is an example of the style of writing:

"I sentence the wretched A. to have his two legs broken at the knees for being a false witness, a thief, concealer, and forger. For being ingrate and a calumniator, W. has to suffer the same penalty. Eight numbers on the hat of D. Six numbers on the hat of W. On account of their sex I merely despise the girls, L. and M."

In order to extenuate in some degree these very summary judgments, he writes at length the biography of his victims, ending up with the sentence: "They are condemned, having fallen into my hat with ten numbers. He will now atone for his iniquity by having his legs broken up to the knees." Lawyers, notaries, magistrates, deputies, ministers appear before his tribunal. He keeps judging, weighing evidence, sentencing, as if he alone were the one just person remaining. He complacently explains the advantages of his methods of administering justice as follows: "You need not think that a lottery so contrived is not a hundred times more safe, moral, logical, just, and also more expeditious than the lame methods in vogue in courts of justice. This, then, is my method of summary justice, and you may rest assured that, instead of pronouncing it insane, all sensible people, with a true sense of justice, will declare it to be both moral and wise. I shall, of course, have many imitators. To kill a mad dog is to suppress ten thousand mad dogs, ready to be let loose upon humanity." "I have done with my lottery to-day," he writes elsewhere. "X. is the winner. I am delighted. He is the venomous fly, the hornet chrysalis of the cholera morbus. And (it is my noble business) I, the poor, ridiculed inventor, so often despised, plundered, slandered, defamed, ruined, bankrupt, sentenced to prison. I, a pigmy, have to suppress the plague and to liberate France. I took his number from my hat. I am, indeed, too lucky. After undergoing such great, such unmerited misfortunes, I well deserve such a reward." At the time of the Presidential election his exaltation became more marked. He desired to go to Versailles to kill M. H. if he should be appointed to the office. During his examination in the bureau this patient became acutely maniacal, and manifested hallucinations. The attack lasted five days, and suddenly disappeared at the end of that time without leaving any traces behind it. Throughout the

period of his confinement at Mazas he was much preoccupied in planning his important works, which he professed to be extremely anxious to finish. Political and social questions occupied him chiefly, and he resolved to write first a book on the education of boys and girls, and afterward on that of fathers and mothers. For such a purpose time is necessary, and he requested that he might be sentenced to a term of ten years' imprisonment, and threatened that if a foolish jury granted him his liberty he would "begin again," for, said he, "I always acted with due premeditation."

In the asylum he behaved in an orderly manner, and employed his time in writing pamphlets against Bismarck, whom he professed to hate. He worked without intermission or proper repose at the solution of all kinds of problems connected with science, politics, and sociology, and he has an inexhaustible stock of suggestions as to new military weapons and strategic designs. The intellectual activity and the lucidity of mind of this patient, together with the cleverness with which he premeditated and accomplished his homicidal attempt, might have induced us to regard his state as a purely emotional condition, but, apart from the recorded maniacal attack, a fuller examination of his mental organization, every act of which proclaims his unstable condition, his inconsistency and self-contradiction, his besetting desire for vengeance, which impelled him to write down on his list of victims not only the name of an eminent statesman, but also the name of the barrister who plead against him, and that of the judge who sentenced him, and of his mother-in-law. His carefully-prepared writing, his scale of penalties, and his ballot all compel his distinct separation from chronic hallucinated forms with systematically evolved delusions. There are also to be mentioned aggressive (persecuting) hypochondriacs, who sometimes pursue, even to the danger of violence, physicians by whom they imagine their diseases have been unskillfully or negligently treated. There are, again, "filial maniacs," who pursue with ardent attachment some imaginary, newly-discovered parent, and persecuting lovers, of whom a very good example was supplied by Venlat, the *soi-disant* lover of the Princess B. But however various and diverse may be the aims and objects of the persecuted persecutors, whether homicide, legal procedure, or the more romantic occupation of pressing a love suit, their methods and actions all bear a common resemblance and are always the same.

The peculiar mental attitude in this form of mental affection, the character and origin of the delusions, prevent the possibility of confounding it with chronic progressive insanity.

A CASE OF MORAL INSANITY.

BY ELIOT GORTON, M. D.,

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Moral insanity has been defined by Prichard as "a disorder which affects the feelings and affections, or what are termed the moral powers, in contradistinction to those of understanding or intellect." With a few modifications this definition may still be accepted, but that the term "moral insanity" is a misnomer which should be relegated to obscurity, will be admitted by all who are familiar with the course and progress of the disease.

The term is misleading, for it implies a disease affecting the morality of the individual, and it is generally so accepted outside of hospital walls. It implies that there must be some congenital or acquired defect of the moral sense as related to sexual matters, and that this is not necessarily so has already been established. As some additional proof I may state that the chastity of the few cases of this disease in women with which it has been my fortune to come in contact, has never been called in question. Another very potent reason for the abolition of the term is the fact that Prichard's moral insanity and the disease recognized to-day by alienists under that heading, are in many instances quite dissimilar.

Moral insanity has been for years a bone of contention and the stumbling block of alienists and jurists; yet it is almost apparent that could we do away with the word "moral" we would at the same time clear away the mists which have so long obstructed our vision and rendered impossible the general acceptance and recognition which this disease deserves.

I think it will be conceded as being more than probable that much of the existing confusion and wide differences of opinion have resulted from an imperfect or erroneous conception of the meaning of the word "moral" as applied to this disease, for of all the mental diseases this one more than any other serves to bring alienists and jurists into contact, and that the importance of its proper recognition from a medico-legal standpoint can not be over-estimated, is evinced by the interest taken in the subject by non-medical writers.

"A rose by any other name would smell as sweet," and whether we designate this disease the "emotional or affective insanity" of

Esquirol, the "mania without delirium" of Pinel, or the "moral insanity" of Prichard, does not alter the fact that it is a distinct form of insanity, of readily recognizable characteristics, which must eventually be accepted by all students of psychiatry.

The scope of insanity has widened, and under new terms are classed many cases which were formerly placed under this heading. Imperfect and multiple as our classifications of insanity still are, much thought is being expended in this direction, and we may therefore hope at some distant day to have a generally accepted classification where moral insanity will be placed under some appropriate heading which will not imply immorality. At least we will have eliminated all but the unmistakable forms of the disease, and this in itself will render its future study comparatively easy.

It is not the purpose of the present paper, however, to discuss the subject from a psychical point of view, but to present for consideration a case which, according to our understanding of the term, is typical of so-called moral insanity. The clinical history is rather complete and full of details, in order that it may be as conclusive as possible and portray a clear picture of this type of insanity.

Miss E. S. was admitted to the hospital on October 10, 1889, with the following history :

Age 47, unmarried, of good habits and liberal education. Her mother died at this hospital a few years ago from an attack of melancholia, said to have been caused by this daughter's actions. A maternal cousin is now in a hospital for the insane, and one of her maternal uncles recovered from an attack of acute mania at this institution. She has now been insane for twenty years, and was, therefore, twenty-seven years of age when her peculiarities were first noticed. Her physical condition was excellent, and the cause was assigned to heredity.

Her brother stated that "for twenty years she has been fault-finding to the last degree, eccentric in habits, and a constant source of annoyance to her family, with whom she lived. Nothing could be done about the house except at her dictation and under her personal direction. She constantly nagged her brothers and sister, often using violence against the latter. Visits the neighbors with long tales of cruelty and abuse received at the hands of her family."

This was the history given on admission.

We repeatedly held long conversations with her, during none of which were we able to elicit a single delusion or other mark of

insanity, except a casual reference to abuse received from her family, in proof of which she showed bruises on her arms. For two weeks or longer she remained under close observation, but was always perfectly rational, pleasant, and agreeable, conducting herself in every way becoming a lady. In fact, so well did she conduct herself, that we had serious doubts as to the advisability of a longer incarceration, and, in the face of her strong hereditary history, we communicated with her brother and the physician who committed her, to that effect, which brought forth the following letters :

LETTER FROM HER BROTHER.

DEAR SIR: Yours at hand, and in reply would say in regard to my sister's case, that her mental trouble is one of long standing, and has been growing worse the past three years—since she came to live with me. I placed her in Dr. C.'s sanitarium three different times for treatment, and, although receiving temporary benefit, she soon drifted back to strange actions and renewed her persecutions of her sister. She would tell her what that relative or this friend said about her, which was entirely false. Would call her all sorts of vile names, thrust her hands in her face, and would scratch and kick her. My sister was always very kind to her, but E. had taken a great dislike to her and could not treat her mean enough. The bruises on her arms were made in self-defense when she was attempting to thrust her hand in her sister's face, an act she delighted in. * * * My sister S. was becoming very nervous, and was afraid E. would do her bodily injury, grèater than she had already done, in the way and manner before stated. Our relatives and friends dreaded to have her visit them, as her conduct and talk made them nervous, and some were afraid of her. * * * E. has the faculty of appearing quite well before strangers, restraining herself, as it were, but soon as they would go away from the house the same old attacks would be resumed. Our family physician will write you a history of her case, and Dr. C. will give you his experience in treating her, if you request it. She used to worry and annoy, and oft-times strike my father and mother, who are both dead now. * * * She imagines the house is not looked after properly, and that my sister and brother are trying to abuse her, which I am willing to *swear* is not a fact.

* * * * *

Yours, etc.,

R. J. S.

LETTER FROM DOCTOR H.

DEAR DOCTOR: In regard to the facts which lead me to believe that Miss S. is insane, I will gladly give you them.

I first knew her a little over three years ago and have been her medical attendant at intervals ever since. I think she must have been deranged for a long time, for by her perverted actions she drove her mother insane and made life intolerable for the rest of the family. Mrs. S. was taken to your hospital and died there. A cousin of Miss S. is in an asylum and another near relative is insane. The patient, as I have observed her, grows progress-

ively worse. Two years ago I urged her brother (as did all the friends of the family who knew the circumstances) to put his sister in some asylum for treatment, both for her sake and his own, but he was unwilling to do so and tried every other expedient in vain. He sent her away into the country for weeks and months at a time; sent her to a sanitarium two or three times, and although for a while during her absence she would conceal her queer talk and actions and appear as sensible as need be, yet she returned home no better. She has frequently asserted that one and another—especially members of her own family—are insane. She tells anyone who will listen to her how all the work of the household and every responsibility devolves upon her, owing to the shiftlessness of her sister. As a matter of fact she is a hindrance to the work of the house. She is violent at times, striking members of her family, poking her fingers under their noses and using most insulting language, exasperating to the last degree. If in mere self-defense they put up an arm or hand to ward her off, she has put court plaster on perfectly healthy skin and paraded around to the neighbors, exhibiting so-called marks of violence where her sister or brother struck her. She can not be depended upon to tell the truth about anything. She locks her room upon going out, because she says her sister will steal her things or else disarrange everything. She poses as owning everything about the place, whereas she is penniless. If you will question her on some of these lines she will probably give evidence of her derangement.

Yours truly,

E. W. H.

We could not doubt the truth of the evidence thus submitted to us, especially when it was followed later by two similar letters from other physicians acquainted with her case, and it was not until after she was informed that we had investigated her story and should be obliged to detain her, that her old spirit asserted itself, commencing with the following letter to her pastor:

MY DEAR FRIEND: I take the liberty of writing to you, knowing from your kind heart you will have sympathy for me in my situation, brought about by a wicked, cruel brother. He has made us a very unhappy home ever since he came with us and before we moved. He is in no business, smoking in the house most of the time. I have told him it was no way for a young healthy man to spend his time, when he would curse and swear, fly in a rage, threaten to knock my brains out. I would raise my arms, which would get the blows, and were black and blue when I came here, which the doctors can testify to. His cursing would be the last thing I would hear on going out of the door to church. If on coming home, I would speak of the sermon, he would begin again, and if it had not been for the comforting words I would hear in your sermon, my spirit would have sunk long ago. He has upset my sister so she has turned against me too. You know I have broken down more than once since my dear mother died, from overcare and sickness brought on by my sister. When I went to Dr. C.'s I was willing to suffer, and ever, if it is the Lord's will, rather than expose her. I have learned lately she has told I was not kind to her, which was just the opposite. I did all I could for her; had her go to the seashore and other places during the summer;

altogether she was away six months, only writing to me but once, which almost grieved me to death. When she came home in May it was no better, she doing all she could against me on the sly, hiding my clothes, etc. * * * I was coming down to your study to open my heart to you, for I could not stand my trials any longer. They would deny everything that was done or said to my brother J., still he knew how things were going, as he bandaged my wrist where W. struck me, and said he was not responsible for his acts and begged me not to expose him and he would get something for him to do, and S. was in such a state she was not responsible for herself, I being the sufferer, bearing what I never will again. I said I was coming out with open complaint, as I could not stand it any longer. * * * He got Mrs. O., whom you know to be a great busybody, and an unsafe and untruthful person, not fit to have anything to do with, to help carry out his wicked scheme. She came around one morning when I was busy with my plants and asked me to take a ride, as she wanted to see a farmer. She called out to every man she met and asked questions until I was perfectly disgusted. She came here with lies. * * * So here I am, and have been treated with the greatest respect and kindness. * * * I have learned through patient submission, in whatsoever state I am, to be content and to "bear up, bear on, the end will tell, the dear Lord ordereth all things well." And be where we will, we can not be deposed from God's love and tender mercy.

Yours sincerely, E. S.

So much for her letters. Space forbids the publication of more, but I have numbers of them in my possession, any one of which bears eloquent witness of her infirmity.

Letter followed letter in rapid succession until finally she commenced to complain of the attendants. She would call me aside and say that "the attendant in charge was not a proper person for the ward; that she saw her strike and otherwise maltreat a most harmless and inoffensive patient." Upon investigation both patient and attendant indignantly denied the report, but Miss S. as positively insisted she saw it, and asked, "if I proposed to accept the word of this low servant in preference to hers." More proof being adduced by reliable patients, she became hysterical and said it was a conspiracy to injure her character. Soon after she renewed the attack, saying the attendant was of bad moral character, and attempted to cite instances in support of her assertion.

Hoping to change the current of her thoughts she was moved to another ward, but with no good result. After her clothes were brought to her she accused the attendant of stealing several articles of wearing apparel, "handsome lace, gold collar-button, and a diamond pin" (which, by the way, it may be as well to state, she never had here). In short, she was moved repeatedly from one ward to another, but always with the same result.

She has now been on nearly every ward in the house, and no one with whom she has come in contact, physician, nurse, or patient, has been spared. She is especially fond of originating reports of some disgraceful affair, either in regard to *patients who have been discharged* or her attendants. At different times she has developed symptoms of hysteria, complaining of all sorts of aches and pains in all sorts of localities, merely to obtain sympathy and attention. She says she can not sleep on account of the abuse meted out to her, and that she has no appetite. The records show that she sleeps eight to nine hours nightly, and her appetite is excellent. She tells me malicious falsehoods about her nurses, even going so far as to accuse them of criminal acts.

To other patients she relates how much she is thought of by the doctors; how she is favored in the matter of diet and in other ways, on account of her wealth and social position; how much she pays a week (she is here at the county's expense); names distinguished men whom she says are near relatives (one of them *was* distantly related to her), and closes the recital with some tale of improper conduct on the part of the doctors. When confronted with evidence of her speech and proof of its falsity, she flatly contradicts ever having uttered such statements, except where attendants are concerned. In the latter case she stoutly maintains the truth of her assertions, and adds other statements equally false in proof.

If a patient with whom she is acquainted goes home, she tells the physician, in strict confidence, stories about him — usually disgraceful ones, affecting his moral character or professional dignity — which she claims were told her by the departed one. She expresses great sympathy and "regret that anyone should talk so; that, of course, she knew it was not true, but she thought it was her duty to let me see who my friends were," etc., all in a most confidential manner, and so ingeniously as to deceive anyone not acquainted with her peculiarities. She is very plausible, and I have no doubt but that some few friends who have called upon her have gone away with the impression that the hospital was a hot-bed of vice.

If she but goes to the library to obtain a book, she seizes the opportunity to slip into a patient's room and regale her with a choice bit of purely imaginary scandal relating to some one not in her favor. Does she attend a dance, she takes her seat next some intelligent convalescing patient and pours into her unwilling ears a tale of woe so piteous — a tale of abuse so flagrant — a tale of

wrongs so unjust — that, did it contain an element of truth, would melt a heart of stone.

Every entertainment, every social gathering, is taken advantage of to spread beyond the confines of her ward stories regarding her attendants or physicians, some of which bear the impress of falsehood upon their face, while others are so plausible that even her sane friends who understand her peculiarities have investigated them.

I have known her to throw articles out of the window and destroy other property, and openly accuse the attendant of stealing them. I have known her to tear her clothing and declare to me that it was done while defending herself from the attack of an enraged and brutal attendant. Only a few days ago she held a small saltcellar in the gas flame until cracked by the heat, and in the morning came to me in tears, saying the attendant dashed it on her dressing table in a fit of jealous rage, thereby breaking it, holding up the damaged article as proof positive.

In conversation she can be very pleasant and agreeable, but in a short time she brings the discussion to bear on herself and her shameful treatment. If art is the topic of conversation, she will tell you "that she paints beautifully and would be glad to have the necessary materials furnished to her, which she would use in painting exquisite pictures." Is music spoken of, "she plays superbly and is so sorry her sister withheld her music, else she would entertain me with choice selections." When sick she is fond of dictating what medicine she shall have and says, "she always intended to become a physician, but after taking one or two courses her health broke down and she was prevailed upon to give it up." Speaking of decorations, she will tell you that "all her family are very artistic and their home is magnificently furnished and decorated, all through her artistic ability." As a matter of fact her "artistic ability" is extremely limited. She paints in a manner below mediocre, plays the piano very little, and her education is ordinary.

Instances, and their name is legion, could be cited when most trifling, most cruel, and most incriminating charges have been made by her against her friends and enemies alike, all of which have been the creations of a disordered mind and absolutely without foundation.

A word picture must necessarily be more or less defective, and it is practically impossible, in a consecutive clinical narrative such as the above, to bring out the cunning and ingenuity exercised in

developing and maturing her schemes. Enough has been said, however, to show the *intense egotism* and the *moral deterioration*, while the intelligence and reasoning powers are not materially affected, nor is there any special exaltation or depression. She can control her impulses, as has been seen, and many of her letters to friends with whom she has but a slight acquaintance are pervaded with a beautiful religious sentiment, and are models of propriety and well-expressed thoughts.

I can not but express my belief, in conclusion, that the day is not so very far distant when there will be a greater unanimity of opinion regarding this disease; when it will be recognized and accorded its proper place the civilized world over, by alienists and jurists alike, marking another milestone in the progress of medical science.

A REPORT ON THE TREATMENT OF EPILEPSY BY FLECHSIG'S METHOD.

BY ISABEL M. DAVENPORT, M. D.,
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In November, '93, my attention was called to Flechsig's treatment of epilepsy by opium given in half-grain doses and increased by one-half grain per day until fifteen grains had been reached, when the opium was discontinued and the mixed bromides (thirty grains four times a day) were substituted.

The article, which was published in the *Neurologisches Centralblatt* of April, 1893, stated that Flechsig and others had met with some success in the use of the method, and having at that time about twelve of these unfortunate patients under my care, I concluded to give them the benefit of the treatment, and accordingly selected Mrs. M., a German woman, fifty-six years of age, who had grand mal attacks, which occurred two or three times a week, with occasional cessation of from one to two weeks. There was no post or pre-epileptic furore, but the patient was usually very stupid for a few days after the seizure had occurred.

On November 5th I had the following prescription filled:

For Mrs. M——. No.— N.

R. Extracti Opii alcoholis, gr. xxxii.

Elixir Aurantii, $\frac{3}{4}$ iv.

Sig. Half teaspoonful a dose.

The attendant in charge was directed to give Mrs. M. one-half teaspoonful the first day; on the second day a half teaspoonful morning and afternoon; on the third day one-half teaspoonful three times a day, and so on, until the amount reached six grains per day, when it was given in grain doses to avoid too frequent administration. The attendant was instructed to watch the patient closely and keep a record of all symptoms.

During the first eight days the patient was cheerful and somewhat exhilarated, expressing herself as feeling "very well, indeed." The skin was moist, pupils dilated, pulse eighty per minute, and the bowels were perfectly free, moving regularly without a cathartic. On the ninth day, when five grains had been given, she appeared somewhat stupid, and late in the afternoon had a severe convulsion, followed by intense excitement. The patient, who had

been always quiet, became noisy and restless, wandering about the dormitory and pounding the doors and windows.

On the morning of the tenth day she became so violent it became necessary to have her removed to one of the cottages for violent patients and to discontinue the opium, when she became quiet and was returned to the cottage for quiet chronic patients, where she had been previously.

On the afternoon of the eleventh day the opium was resumed, and from this time on she continued quiet and industrious, knitting diligently. This condition continued until she had taken nine and a half grains per day, when she became drowsy, and on the nineteenth day, after taking ten grains, she suffered from another seizure. From this time there was nothing remarkable, except that the drowsiness increased until the patient slept in her chair the greater part of the day, though she [could be easily aroused, and went to her meals regularly.

On November 28th she took fifteen grains of opium, and had to be assisted to her meals and to bed, because of stupor. The pulse was sixty per minute, feeble, though regular. Skin moist, pupils widely dilated, bowels regular.

On the twenty-eighth day she was given a solution of the mixed bromides, thirty grains, four times a day.

On December 2d, four days after the opium was discontinued, she suffered from a slight chill and kept her bed for two days, apparently from exhaustion, there being no rise of temperature or other evidence of sickness. After this the patient continued well, cheerful and industrious, having no seizure until December 28th, when she had a convulsion, and from that time they have continued, though not occurring as frequently as before the treatment.

The second patient put upon this treatment was Miss K. R., American by birth, of Irish parentage; twenty-eight years of age.

Has had epilepsy (*petit mal*) since she was two years of age, the attacks occurring from one to three times a day, and seldom less than three times a week. Sometimes the aura occurred without the seizure. Has always been irritable and violent tempered. Was admitted to the hospital in 1890. Has always been considered a violent and dangerous patient, on account of the intense post-epileptic furore and the extreme irritability which followed the attack. Treatment was commenced on December 14, 1893, and continued, as in the case of Mrs. M., reported above. On the third day the bowels were loose; the fourth day the patient had a seizure,

but was quiet and pleasant, the bowels moved freely, cathartics not being necessary. Pupils slightly dilated.

She continued in this condition until $11\frac{1}{2}$ grains had been taken, when she had a slight seizure and was somewhat irritable, but soon became pleasant and cheerful, continuing thus with some drowsiness until January 14th, when she had taken fifteen grains. The opium was discontinued and the bromides given as in the first case.

From this time, January 14th, until June 13th, the seizures were entirely absent, though she had the aura twice. During this time she was quite pleasant, cheerful, and industrious to such a degree I was enabled to transfer her to the cottage for convalescent patients, which is the best ward of the institution.

On the 13th of June she had a slight seizure, but remained pleasant and well-behaved until the 19th, when she had two seizures and became quite irritable, the irritability continuing until she became violent to the other patients, and I was compelled to again move her to one of the wards for violent patients. While on this ward the treatment was repeated, beginning on August 7th, after which the patient became quiet, though the seizure did not cease. However, she was transferred to the convalescent cottage, because of her good behavior, but soon became irritable, making a very vicious and violent attack upon the writer, when she was transferred to one of the wards for violent patients.

Miss S., age nineteen, American. Has had petit mal epilepsy since she was eight years of age. Cause unknown. The seizures were very slight, though frequent, occurring three to six and eight times a day. No furore or excitement. On the contrary she was much depressed, sitting in one place all day, with hands folded in her lap, and eyes cast down, never speaking and crying almost continually; was so stupid she did not attend to the calls of nature, hence was very untidy.

Menstruation had ceased during five months. Hands cold, tongue furred, appetite poor.

On June 2d opium treatment was instituted and continued as in the other cases. Nothing unusual appeared, except that the pupils were contracted, whereas, in both cases reported they were dilated during almost the entire course.

On June 7th she was reported as being somewhat drowsy and the bowels as constipated. The usual dose of cascara sagrada and syr. glycyrrhiza, equal parts of each, given without effect, and was followed by mag. sulph., one tablespoonful, but no evacuation was

induced until an enema was given. She continued drowsy until the 11th inst., when she became bright and cheerful, as well as industrious. Menstruation returned. The bowels had continued free and regular since the instance spoken of. The patient was bright and perfectly rational. This condition continued up to June 26th, when she had taken $11\frac{1}{2}$ grains. She complained of nausea. However the opium was continued to $14\frac{1}{2}$ grains per day, and discontinued at this period because of nausea and vomiting, and the bromide of sodium, potassium and ammonium given. From this on the patient was perfectly well until August 26th, when she had a slight seizure, which, however, apparently left no bad effect.

September 20th.—Miss S. is industrious, rational, and pleasant. Has gained in weight and appears like a different person than the one admitted to my ward six months previously.

On October, '94, she went home on probation, having had but one seizure since June 2d.

Miss S. W.—Patient had epileptic convulsions for thirteen years previous to entering the hospital. Readmitted May 5, 1894.

May, 1894.—Had several seizures that month. Opium treatment commenced the 26th. Given one-half grain, increasing one-half grain each day.

June, 1894.—Opium continued up to the 29th. Patient took $8\frac{1}{2}$ grains on the 11th. Bromides were instituted afterward. There was no seizure during treatment.

July, 1894.—Patient is taking thirty grains of mixed bromides four times a day. No epileptic seizures recorded.

August, 1894.—No record of seizures. Medicine taken every day. Tried to commit suicide.

September, 1894.—Medicine continued. No record of seizures. Mental state much better.

October, 1894.—Medicine continued. No seizures recorded.

November, 1894.—Same as in October.

December, 1894.—Medicine continued. Patient treated for prolapsed uterus. No record of seizures.

January, 1895.—Medicine continued. No record of seizures.

February, 1895.—Medicine stopped the 2d. No record of seizures.

March, 1895.—No medicine taken. Patient well mentally. No record of seizures.

April, 1895.—No medicine taken for epilepsy. Patient quite well. No seizures recorded. Returned to county recovered.

A. S., aged thirteen years, said to have almost daily epileptic attacks ever since she was six years of age. Received December 1, 1894.

December 4th.....	3 seizures.
“ 9th.....	3 “
“ 10th.....	3 “
“ 11th.....	2 “
“ 12th.....	1 “
“ 14th.....	2 “
“ 15th.....	3 “
“ 21st.....	6 “
“ 22d.....	1 “
“ 23d.....	2 “
“ 26th.....	2 “
“ 30th.....	2 “
“ 31st.....	1 “
Total in December.....	31 “

No treatment for epilepsy during this month.

January 1st.....	2 seizures.
“ 2d.....	3 “
“ 7th.....	2 “
“ 8th.....	2 “
“ 11th.....	1 “
“ 12th.....	1 “
“ 14th.....	2 “
“ 15th.....	1 “
“ 20th.....	1 “
“ 21st.....	1 “
“ 23d.....	2 “
“ 25th.....	2 “
“ 30th.....	1 “
Total in January.....	21 “

Opium treatment started 1st January. Given one-fourth grain extract opium, dose increased one-fourth grain daily. On the 24th January $6\frac{1}{4}$ grains. Opium stopped, because patient grew very stupid and restless. Given twenty grains bromides. At that time convulsions were much more severe and of longer duration than formerly, but after that they became light and were only few.

February 6th.....	2 seizures.
“ 8th.....	2 “
“ 9th.....	1 “
“ 12th.....	1 “
“ 13th.....	1 “

February 20th	2 seizures.
“ 25th	1 “
“ 27th	2 “
<hr/>	
Total in February	12 “

Less irritable, also less bright; grs. 60 bromide of epilep. mixture continued.

March 1st	2 seizures.
“ 2d	3 “
“ 9th	2 “
“ 12th	2 “
“ 13th	2 “
“ 18th	1 “
“ 19th	1 “
“ 22d	1 “
“ 23d	1 “
“ 29th	1 “
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Total in March	16 “

Medicine continued. Patient grows quieter at the end of month.

April 1st	1 seizure.
“ 2d	1 “
“ 7th	2 “
“ 11th	1 “
“ 12th	1 “
“ 13th	1 “

I have given this treatment to eleven patients in all, with similar results, i. e., a cessation of the attacks, but no permanent benefit.

My colleagues have treated nineteen cases, making thirty patients of this hospital who have received the Flechsigs treatment for epilepsy by opium during the past year. Among the number are two boys aged respectively fourteen and seventeen years, to whom the opium was given in the same quantity and with similar symptoms and results. With the exception of two cases, all have been less irritable and have gained in flesh.

Dr. George Boody of this hospital, who had twelve cases, reports one man who had a cessation of the seizure for seven months and returned to his home apparently well, but has just been readmitted to the institution, the seizures which have returned being as violent and frequent as before. Another man who had suffered for several years from epilepsy, with severe pain over the vertex, and also from intercostal pain, had no convulsion for three months, and though they have returned, he is entirely free of the distressing pain spoken of, and appears to feel that he is well repaid for the treatment.

Several interesting features have been noted, namely, the dilatation of the pupils in all the female cases, with two exceptions, and also the fact that all the female patients, with three exceptions, were free from constipation, and in some cases the bowels were too loose, while the male patients, on the contrary, were very much troubled with constipation, which required large and frequently repeated doses of cathartic medicine, probably because the stronger muscular system of the male patient was not relaxed by the opium to the same extent as that of the female.

Several melancholiacs received much benefit from the large doses of opium, which exhilarated them and gave a sense of well-being, which continued permanently in two cases, though the epilepsy returned.

After a careful and thorough trial, extending over a period of more than a year, I am forced to conclude that:

1. Flechsig's method of treatment for epilepsy does not result in recovery.

2. That it is of benefit in that it gives many of these unfortunates a gratifying respite from the attacks, and thus adds to their comfort.

3. That it is soothing and quieting to the irritable patients and exhilarating to those suffering from depression, thus relieving distressing symptoms in both cases.

4. That through the cessation of the seizures and other annoying symptoms the patient is enabled to enjoy something of life in general and to recuperate physically, and for these reasons I believe it is desirable to repeat it at intervals of two or three months, if thereby we can obtain the results mentioned above.

NOTE, APRIL 15.—Since this report was made, the third patient mentioned (Lizzie S.) returned to the hospital, after a visit of three months, in exactly the same condition as when first admitted, noted above, and after having the opium treatment repeated is perfectly well and has had no seizures since the discontinuance of the treatment, five weeks ago, whereas when admitted she was having as high as twelve and fifteen petit mal attacks per day.

JUNE 19, 1895.—Seizures reappeared, and have continued since that time, though less frequently. As is usual with her, while having the attacks, she is in a rather stupid condition, though rational. I will add that, so far, she has not exceeded six convulsions per month, whereas she had ten or twelve petit mal attacks each day before taking the treatment.

I have found no benefit in repeating the treatment oftener than at periods of three months after the bromides have been taken. In every case the seizures became less frequent and the patient is less irritable.

NOTES ON HOSPITAL DIETARIES.

BY ELLEN H. RICHARDS,

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The plan of guiding the officers of public institutions in the choice of their supplies is being tried in New York, where the State Commission in Lunacy obtained, in 1893, from the best authority attainable — Dr. Austin Flint — a suggested dietary. By sending this to the institutions for the care of the insane, with the request for modifications as shown by experience, the commission has secured a report of great value, not only to the State of New York, but also to all the country.

An exhaustive study of the German hospital dietaries has been made by Dr. W. Prausnitz of Munich, and the results are given in an able article in the *Deutsche Vierteljahresschrift für Öffentliche Gesundheitspflege*, 1893, p. 563. This should be studied by all who are concerned in hospital management; but we find that the habits of the people and the food they eat are so different that only general help can be gained from any foreign source.

Dr. Prausnitz, however, clearly defines the lines on which the work should progress, and recommends that the house diet be a good, normal one, suitable for the majority of cases, and one from which the liquid diets may be largely taken. To this additions may be made in especial cases.

It is common in Germany to divide the patients into three groups:

1. Those suffering from accidents, skin diseases, or other local troubles, who require the diet of an adult in rest (not a full work diet).
2. Those severely ill, who require specially appetizing and digestible food in rather large quantity.
3. Those suffering from acute fever or chronic disease of the digestive organs, for whom liquid or other special diet is prescribed.

Prausnitz states that, for the first class, food equivalent to —

	Proteid.	Fat.	Carbohydrates.
	Grammes.	Grammes.	Grammes.
For a man.....	110	50	350 to 400
For a woman.....	100	50	300 to 350

— should be prescribed.

For the second, the proteid and fat should be increased to 130 and 70, respectively, but the starch should be limited.

For the third, no rule can be given, for here the physician must individualize.

In Leipzig, a specially hearty eater is allowed a half more of everything. Sometimes extra bread is given, to the amount of 100 to 200 grammes, furnishing 9 to 18 grammes of proteid, and 50 to 100 of carbohydrates.

The food value of Dr. Flint's revised dietary is not given in his report, and, therefore, we may not be correct in our assumptions; but we find the figures, as estimated by the factors which we are in the habit of using for other work, to be about —

Proteid.	Fat.	Carbohydrates.	Calories.
Grammes.	Grammes.	Grammes.	
133.4	128.5	412.3	3433

A comparison of these figures with those given above will show, either that the German physicians very much underfeed their patients, or that there is a great waste in American establishments. We need many more exact figures, and consideration of questions of climate, mode of life, etc., before this point can be settled. At present we feel inclined to consider the proposed dietary to be somewhat in excess of the necessary requirements of a well-managed institution.

The quantities of eggs and butter proposed in Dr. Flint's dietary are beyond the means of a State institution, and in a charity hospital the expense of these articles should be guarded.

In passing, it may be remarked that we have not been able to persuade American people to eat the quantities of peas, beans, and cheese which the report calls for, even with the most careful cooking and flavoring.

As a basis for comparison, we give in the following table the quantities of some other dietaries which have been under our control or direct observation.

The cost of No. 1 we estimate as from 20 to 25 cents per day; the cost of No. 2 was 22 cents; of No. 3, 14 cents; of No. 4, 10 cents.

The number of persons included in the family was, for No. 2, 130; for No. 3, 600; for No. 4, 2,400. This is an important factor in the cost.

AVERAGE DAILY DIETARY AS GIVEN BY DR. FLINT, IN NEW YORK, COM-
PARED WITH THAT FROM VARIOUS OTHER PLACES.

	Dr. Flint, N. Y. Insane Hospitals.	Chicago Univer- sity—6 months.	Valparaiso (Ind.) Normal School— 3 months.	Kankakee (Ill.) Hospital.
	Oz.	Oz.	Oz.	Oz.
Meats (with bone), salted meats, fresh and salt fish	12	14.6	7.3	11.2
Flour, corn meal, and macaroni.....	12	7	9.2	14
Potatoes.....	12	10.9	15	8
Milk.....	16	19.4	8.5	12.7
Cream.....		1.9		
Egg.....	2 (1)	0.6	0.05	0.17
Sugar.....	2	2.1	2.1	1.8
Butter (and lard).....	2	1.6	1.8	1.4
Cheese.....	1	0.06	0.02	0.18
Rice, hominy, and oatmeal.....	1.5	0.8	1.3	1.4
Beans or peas	1.5	0.2	0.6	0.64
Dried fruits.....		1.4	1.4	1.5
Fresh fruits and vegetables.....		3.5	8.8	5
Molasses and syrup.....		0.3	1.8	0.94
Cost (cents).....	20 to 25	22	14	10

It is a comparatively simple matter to sit at one's desk and make out a good and sufficient menu, covering the physiological requirements for any given class of people. A complication arises when this menu must be furnished for a definite and limited sum; but the crucial test, and the one which proves fatal to nearly all of our attempts to put well-thought-out theories into practice is the refusal of the people to eat the good things thus carefully provided for them. Who has not seen a dog refuse the dainty morsel from his mistress' dainty hands, and then go straightway to a neighbor's swill-pail and ferret out some scrap which satisfied his craving?

We sometimes forget that the habit of eating civilized food is as truly a matter of education as is the wearing of well-fitting and becoming clothes, or the suitable furnishing of one's house. We are apt to think that our food should seem a luxury to those in the so-called lower classes, or to people poorer than ourselves. This is not the case, as one finds when one begins to cater to the inmates of an institution, school, or boarding-house. People like best that to which they are accustomed.

It is true that the attitude of mind has much to do with the food habit, and, if one will, one can learn to like almost anything.

Therefore the strongest hope of the provider for a mass of people lies in persuading them that the prescribed food is very good in itself, and not merely good for them. To this end the "pills" must be not only sugar-coated, they must look like candy. In these facts may be found the reason why food reformers have hitherto failed, and why most of us reasonable "food cranks" may be worsted any day by a really good cook who will give the people what they like.

It is not enough, therefore, to calculate the food value; not enough to select the best recipes; not enough to have the food served in a manner that is attractive to us. The food must have a familiar look and taste, or enough so that the question will not be raised whether it is a new dish or not.

A study, therefore, of existing habits and customs is essential to success in catering to any large body of people, especially those who have not been accustomed to variety. If they could be fed with their eyes bandaged it would be easier.

In hospitals these considerations are especially important, and in hospitals for the insane they are particularly so, for there the nutrition is of the utmost consequence.

The steward of any institution should, therefore, be familiar with the idiosyncrasies of the inmates, and should introduce slowly, and in small quantities, any new article, and not force a carload of cheap but unacceptable food upon the unwilling cook. The cook feels the pulse of the institution, and the practice of having a steward who does the buying and ordering, and a cook who only prepares the materials provided by others, who do not come in contact with the kitchen, is not to be recommended.

The matter of waste is often a serious one, but it must be carefully considered whether it does not cost 10 cents to save 1. Even if one-third of the potatoes are wasted in careless paring, it will not pay to hire high-priced help to save the potato parings, however it may vex the economist to see them fed to the hogs. A very nice balance must be kept in this way between the theoretical and the practical. But the great struggle comes with the attitude of the patients toward their food, and this again is largely in the hands of the nurses and attendants. If there is confidence in the kitchen management, so that the doctors, nurses, and patients feel that the food is chosen and prepared with the best knowledge, care, and skill available, then, and only then, will there be some hope of improvement in the present unsatisfactory conditions.

THYROID FEEDING IN SOME FORMS OF MENTAL TROUBLE.

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At a meeting of the Medico-Psychological Society, held in Chicago two years ago, I read a brief paper on some problems in cell nutrition, taking the ground that the day was not far distant when certain apparently hopeless cases of mental trouble would be surely and regularly cured by the adoption of therapeutic measures not yet known. The opinion was formed deliberately as the result of an extensive experience with epidemics of typhoid among the insane, where recovery after recovery took place in cases of insanity looked upon as incurable. The fact that this happens now and again in acute diseases, such as pneumonia, is accepted by many, and by others regarded as mere coincidences.

There are others again who maintain that such results, obtained by a temporary stimulation of the nerve cells, are not likely to prove permanent, but are evanescent. This is quite true in some varieties of insanity, but does not apply to the class of cases cured by the development of acute disease. This fact will be strikingly illustrated by some of the cases detailed farther on. As pointed out in a former paper, we sometimes have patients who get so far toward recovery, then for a time stand still, no matter what we do, and finally slip back into an apparently hopeless condition.

We feel that theoretically they should recover, and yet there is something we can not put our finger on necessary to give the patient the spurt necessary to prevent the drifting into hopeless dementia. It is in these cases the unexpected happens, when typhoid or some acute disease occurs — possibly the friends remove the patient, who recovers in spite of our prophecies to the contrary. Such a result has happened more than once in the experience of most of us who have been any length of time in hospital service.

It was with peculiar interest we read the first vague notes of thyroid feeding in cases of mental disease, and when our experiments were under way the results obtained by Drs. McPhail and Bruce made us follow up the subject with deepened interest. We felt quite satisfied that success with thyroid feeding must be a very doubtful quantity in any but the class of cases benefited by acute

disease, and, as time goes on, it will be learned that this treatment requires most judicious handling, being just as dangerous in some cases as it is beneficial in others. For this reason the earlier in the day extensive clinical studies are published the better.

Having in mind the class of cases particularly benefited by acute disease, the selection of patients for the experiments in thyroid feeding was made with great care, and the results justified the course followed in a most gratifying way in several instances.

In citing cases, it is impossible in the limited time at my disposal to give more than a hurried outline, and I am forced to deal somewhat in general statements; but the cases mentioned are those in which it was hoped to secure benefit. We have made a series of experiments with thyroids in well-marked chronic cases with some peculiar results, which can not find place here.

As a preliminary experiment a chronic dement, whose mind is almost a blank, was fed fifteen grains of fresh thyroids three times a day. The experiment was unsatisfactory. There was difficulty in getting the glands regularly, and the patient could not be depended on to take the thyroids when called upon to do so. There was little or no reaction, the temperature and pulse were not disturbed to any marked extent, and the patient's mental condition remained quite unchanged. Beyond the loss of a good many pounds in weight, rapidly regained when treatment was discontinued, the results may be said to have been negative.

CASE I.—J. S., male, age 20, single, of active and temperate habits. Twice insane before present attack. Hereditary, exciting cause la grippe. Insane two weeks before admitted. In certificate it is stated, "He is dull, impassive, tendency to look vacantly, and shows no sign of intelligence. He hesitates and does not wish to answer questions. General appearance, melancholy. His whole conduct is quiet, takes no interest in anything, chews chips (going to swallow these). Put his hands on the hot stove. Every appearance and action of dementia. He held a book in his hand for half an hour without moving, etc."

Admitted January 12, 1893.—Was in a state of complete stupor, without intelligence, dirty in habits, and required as much attention as an infant.

In January, 1894.—The patient unchanged, getting thinner in spite of every attention in the way of extra diet and tonics.

In January, 1895.—Unchanged mentally, although much improved in physical health. Sits in one place all day; has to be led

out to meals, and is in a condition of complete stupor. Voids urine in bed regularly every night, and clothing has to be changed every day.

January 8, 1895.—During his previous residence in this hospital, when his mental condition was the same as at present, he recovered during an attack of typhoid. It is thought that under the circumstances thyroid feeding might give interesting results.

January 8th.—Treatment commenced with one dram raw thyroids. Before giving, temperature 97.4, pulse 78, respiration 13. Difficult to get specimen of urine for analysis.

January 10th.—Thyroids omitted on account of slowing of pulse — 51.

January 12th.—Five grains of desiccated thyroids noon and night.

January 13th.—Five grains t. i. d.; perspiring freely. Habits more cleanly; puffiness below the eyes; much brighter mentally, and will laugh and talk.

January 14th.—Slight epiphora and œdema. Urine obtained and analyzed; color, light amber; react. acid; sp. g., 1.016; no albumen, no sugar; dose of thyroids increased to 10 grains t. i. d.

January 16th.—Perspiring freely, muscular twitching in hands. Brighter than at any time since admission. Laughs and talks freely.

January 18th.—Dose increased to 15 grains t. i. d. No perspiration.

January 19th.—Skin dry and only a little moisture in axilla. Obeys instructions with alacrity. Dose increased to 20 grains t. i. d.; no change.

January 22d.—Perspiring; has herpes labialis. Twitching of muscles of thumb.

January 23d.—Same doses, viz: 20 grains t. i. d. Reaction marked. No further mental change.

January 24th.—Nasal mucous membrane much congested. Twitching of muscles of hand and left side of upper lip marked. Is very bright mentally.

January 28th.—Dose increased to 25 grains t. i. d. Brighter than ever, answers questions readily. Complains of thirst. Flushed at times and perspiring.

January 30th.—Talks a great deal. Answers all questions. Pulse rapid, irregular, and weak. Hands tremble. Muscles of face twitching.

January 31st.—Thyroids discontinued. Complexion clearer.

Scales on face. Complains of thirst and of feeling sick. Talks a great deal. Has lost flesh and is weak. Fierce twitchings of upper extremity and face. Arterial tension diminished. Complains of headache and gastric distress. Urinary analysis—color, light amber; c. g. 1.022. Acid; a trace of albumen; no sugar.

February 1, 1895.—Quite well mentally, as far as can be ascertained. Still complaining of nausea and thirst.

February 2d.—Desquamating freely. Quite well mentally. Albumen disappeared from urine.

February 3d.—Feeling better physically; very hungry; put on Easton's Syrup.

February 4th.—Improved; is bright and happy and can not get enough to eat.

February 5th.—Putting on flesh rapidly.

February 6th.—Not quite so bright mentally.

February 7th.—Has suddenly relapsed to condition of complete stupor; has returned to his old dirty habits.

March 1st.—No improvement; is worse physically and no better mentally for treatment.

The result in this case was disappointing, although we felt satisfied the relapse was likely to occur. The sudden way in which this happened was remarkable, but I have seen the same thing take place several times after typhoid.

H. S., male, age thirty-five, married; habits of life good; exciting cause, financial troubles; became insane in January, 1894, and was admitted to Rockwood Hospital in February of the same year. The information given in certificate was not very satisfactory, but it was said that patient "mutters and crouches, tears his bedding, throws the contents of his pail around the walls of his cell, and is occasionally uncontrollable; is the subject of various delusions; is incoherent in conversation, wild and dangerous." Wife states that on January 23, 1894, came home yelling and saying that he had gone crazy, that something was wrong with his head. He then made several attempts at suicide.

When admitted to Rockwood was in a condition of stupor and in wretched physical health; circulation sluggish.

March 19, 1894.—Sleeps well, takes his food fairly, never speaks, sits in one place in a stupid state all day long, takes no interest in his surroundings, cleanly in habits but careless as to appearance; has been placed on extra diet, given tonics, etc.

May, 1894.—Unimproved in spite of treatment, very destructive

to clothing, does not talk, untidy, sits in one spot all day, can not be induced to work, has gained a little in weight, but physical health still very poor; very constipated.

July, 1894.—Dirty in habits day and night, destructive to clothing, quiet and never violent, never speaks; improving in physical health.

August, 1894.—Condition unchanged.

January, 1895.—In much better bodily health; not changed mentally. Dirty in habits; case not improving, but may be benefited by thyroid treatment.

January 14, 1895.—Treatment commenced. Before first dose was given, temperature 97 3-5; pulse 79, respiration 19; urine examined prior to commencement of treatment, amber colored; s. g. 1.026, froth somewhat persistent; acid phosphate present. No albumen, no sugar. Slight trace of indican. Five grains of thyroids given at noon and night.

January 15th.—Morning temperature, 99.1; evening, 98.3; morning respiration, 20; evening, 23; pulse, 82; evening, 75. Five grains thyroids given three times a day; perspiring freely.

January 16th.—Same doses. Perspiring freely. Morning temperature, 99.3; morning pulse, 82; respiration, 19. Evening, 99.2; evening pulse, 81; respiration, 22. Still dirty in habits; only one dose of thyroids given. Temperature, 98; pulse, 87; respiration, 19.

January 18th.—Dirty in habits. Dose of thyroids increased to 10 grains three times a day, as no mental change has taken place. Morning temperature, 99.3; pulse, 95; respiration, 24. Evening temperature, 99.2; pulse, 90; respiration, 16.

January 19th.—Much brighter mentally, and talks; says he feels a great deal better. Perspiring freely. Temperature, 98.1; pulse, 92; respiration, 24.

January 21st.—Supply of thyroids exhausted. No marked change in pulse, temperature, or respiration.

January 22d.—Dose of thyroids increased to 15 grains three times a day.

January 23d.—Decided reaction denoted by pulse and temperature. Morning temperature, 100; pulse, 97; respiration, 20. Evening temperature, 99.4; pulse, 113; respiration, 28. Answers questions quite readily. Is very nervous at times, and his judgment is far astray.

January 24th.—Epistaxis. Perspiring freely. Morning temperature, 79.9; respiration, 23; pulse, 93. Evening temperature, 99.3; respiration, 28; pulse, 103. No change mentally.

January 25th.—More talkative than ever before; pulse, temperature, etc., about the same.

January 26th.—Dose increased to 20 grains three times a day.

January 29th.—Since the dose was increased little change in pulse, temperature, and respiration; average about — temperature, 99; pulse, 90; respiration, 25. Is steadily improving mentally; answers all questions promptly; says he feels better than ever. Face often becomes flushed, tongue coated, costiveness marked.

January 31st.—Saliva running from side of mouth, causing seborrhœa. Says he feels sick at stomach; vomited after dinner; complains of headache.

February 1st.—Thyroid discontinued to-day. Sick at stomach. slight desquamation on forehead and arms.

February 2d.—Desquamation and nausea.

February 3d.—Headache, nausea, urine acid, s. g. 1.034. No sugar, no albumen. Has lost much flesh; is much better mentally, although not well. Has been put on Easton's Syrup.

February 10th.—Sitting up, but very weak. Eats well and is cheerful. Steadily improving mentally.

February 20th.—Still improving and gaining in every way.

March 1st.—Getting fat. Eats and sleeps well. Is quite happy and wonderfully better mentally.

March 15th.—Continues to improve. Working steadily. Quite recovered mentally.

March 26th.—Discharged recovered.

R. D., male; age, 45; single; insane nine months before admitted; delusional melancholia; cause of disease probably syphilis; admitted April 5, 1894. In poor physical health. A typical case of melancholia. Put upon hg. and iod.

May, 1894.—No change mentally. Bodily health decidedly improved.

June.—Unimproved.

July.—Complains of head a great deal.

July 5th.—Attempted suicide. Saved from drowning by the bravery of a fellow patient.

October, 1894.—Unchanged.

January 9, 1895.—A little better.

March, 1895.—At a standstill, mentally.

March 5th.—Is to be put on thyroid treatment. Weight, 161 pounds; pulse, 85; respiration, 22; temperature, 99.1 in sitting posture; 6 in recumbent posture; temperature, 97.3; pulse, 59;

respiration, 17. Urine examined — color, light amber, acid; s. g., 1013. No albumen; no sugar.

March 9th.—He looks on it as a joke—his being kept in bed. Sometimes sulky. Desiccated thyroids, 10 grains, given to-night. Face flushed.

March 11th.—Fifteen grains t. i. d.; eats well, face not so flushed

March 12th.—Twenty grains t. i. d.; twitching of fingers this A. M. Face flushed, much excited.

March 3d.—Talking a great deal.

March 15th.—Losing flesh rapidly; feels ill; vomited to-day.

March 16th.—Tongue coated; exfoliation of skin of hands; headache, drowsy, trembling of whole body.

March 17th.—Skin peeling off hands in great flakes.

March 18th.—The twenty-grain doses still continued; a general feeling of malaise; has constant headache.

March 19th.—Thyroids discontinued; feels very ill; appetite poor; nervous trembling of hands, constant arterial tension diminished; has lost eleven pounds in weight since treatment commenced.

March 20th.—Sleeping a great deal.

March 21st.—Is bright but does not eat much; talking a great deal of nonsense; cheerful but restless, and will not stay in bed.

March 23d.—Taking tonics but appetite still poor; sarcastic. There has been a complete mental change, and he is the opposite of what he was before treatment commenced, and behaves and talks like one intoxicated; urine color, light amber; s. g. 1.016; acid, no albumen, no sugar. Has gained six pounds in weight in a week.

April 15th.—Improving physically and mentally. Is full of fun, and jokes continually; delusions have disappeared, but he is too full of mischief to be considered well; working in brush shop.

May 1, 1895.—Is his old self again physically; mentally bright and cheerful.

May 7, 1895.—Slightly depressed, so the attendants state; he denies this to the medical officers.

May 16th.—Is restless but cheerful and full of fun.

May 20th.—Weight 161; in excellent physical health, and decidedly improved mentally; seems to be recovering.

J. M., female; single; age, 21; native of Scotland; hereditary tendency marked; exciting cause not stated. Was admitted in November, 1894, and at that time had been insane two months or more. The history and medical certificates contained meager details of the patient's condition. She was said to refuse food and

medicine, to destroy clothing, to expose her person on every opportunity, to be filthy in her habits, etc.

When admitted was found to be in poor physical health, pupils dilated, and face a good deal congested, although this appearance was probably intensified by a large amount of acne.

She had a staring look, refused to converse, and was in a half-dazed and stupid condition. Was placed upon tonic treatment, and every possible effort made to build her up, without avail. At times she was excited and erotic, and inclined to be violent, although it was impossible to get her to converse. At all times the element of stupor was prominent. The skin had a greasy appearance and the patient ceased to menstruate immediately after her admission. About the middle of January the case began to appear hopeless, as there was not the slightest response to the different methods of treatment employed, and the patient seemed to be degenerating. The weight was about 120 pounds; pulse, 85; temperature, $98\frac{1}{2}$; respiration, 16, when thyroid treatment was commenced.

January 26th.—Ten grains of thyroids given three times. No effect.

January 27th.—Dose increased to fifteen grains three times a day. Evening temperature, $98\frac{2}{3}$; pulse, 80; respiration, 19, and pulse irregular.

January 28th.—Same dose of thyroids. Temperature, $98\frac{1}{2}$; pulse, 96, irregular; respiration, 17; face flushed and feet cold.

January 29th.—Temperature, $99\frac{2}{3}$; pulse, 100; respiration, 19; face flushed and patient quite talkative.

January 30th.—Thyroids increased to twenty grains three times a day. Temperature, 100; pulse, 120, intermittent. Mental condition much the same as previous day.

January 31st.—Temperature, 100; pulse, 108; Eyes watery; respiration, 19; pulse intermittent; patient brighter mentally.

February 1st.—Temperature, 100; pulse, 107; decidedly better mentally. Same dose of thyroids.

February 2d.—Much the same.

February 3d.—Temperature, $98\frac{1}{2}$; pulse, 100; respiration, 18; talks quite rationally; is interested in her surroundings; the reaction from thyroids very marked; evidently on the way to recovery.

February 4th.—Thyroids discontinued, as patient began vomiting. Temperature ran up to 100, and pulse 120. The pulse was most irregular and of wretched character.

February 5th.—Temperature remains 100, but pulse has dropped to 80. Mental condition satisfactory. Has been placed upon an iron tonic.

February 9th.—Has remained very well mentally until now, but to-day shows a tendency to relapse. Is somewhat stupid and inclined to be impulsive. Was immediately put to bed again and given a cathartic. Brightened up at once and went on steadily to recovery.

On February 28th weighed 119 pounds; on March 8th, 126 $\frac{3}{4}$; March 14th, 133 pounds; March 18th, 136; on March 12th, menstruated; on March 25th was discharged recovered.

F. C., female, age 34, married; case of puerperal melancholia, with stupor. Was insane five weeks before admission. Admitted September, 1894. Her delusions were those characteristic of her form of mental disease, and there was a marked degree of stupor, as well as a certain amount of excitement at the time of admission.

In December, 1894, in spite of every endeavor in the way of feeding and building up, the patient began to fall back and the stupor became pronounced. The patient's habits were dirty, memory deficient, and at times she was markedly resistant.

On January 24, 1895, she was put to bed, preparatory to commencing thyroid feeding. Her weight was 102 pounds. The dose of thyroids prescribed was fifteen grains t. i. d.

January 27th.—Flushed and much better mentally; less resistant, although inclined to be excited.

January 29th.—Temperature, 98 $\frac{2}{5}$; pulse, 75; respiration, 15; face flushed, brighter expression. Same dose of thyroids.

January 30th.—Temperature, 99 $\frac{1}{5}$; pulse, 100; respiration, 18. Marked improvement in habits.

February 3d.—Temperature, 99; pulse, 80; respiration, 17. Says she feels better. Exfoliation of skin of face and lips.

February 4th.—Very restless. Treatment discontinued. Put on iron, quinine, and nux vomica.

February 9th.—Sitting up to-day; talks rationally, and has written to her home.

February 17th.—Has been quite well until to-day. Has become resistant again.

February 19th.—Still dull; ordered calomel and a saline.

March 3d.—Improving; has developed a large appetite, and is gaining in weight.

March 10th.—Decidedly better.

March 25th.—Has gained $7\frac{1}{2}$ pounds in two weeks.

April 10th.—Very much better than formerly. Went home on probation.

May 29, 1895.—Reported better, and getting along nicely at home, doing some housework, etc., although not completely restored mentally.

Perhaps the number of experiments is too small to justify us in claiming much for the results, but several very striking facts must be apparent. Cell nutrition is undoubtedly affected in a striking manner, increased metabolism occurs as the result of a quickened circulation, and the autotoxic process that exists in some, if not all, cases of mental disease is interfered with in a way that may be beneficial. In other words, some patients are given a new start. On the other hand, if the vitality is low and the patient has not the ability to recover from the fever induced by thyroid feeding, decided harm will result from the treatment, and a rapid decline in strength probably takes place.

The sudden relapses in the well-marked chronic cases are similar to the relapses occurring in those patients who are temporarily benefited by acute disease, and yet they point out one significant fact, a fact that some day we must profit by, and it is this: If it is possible to produce temporary improvement of a marked character in certain cases of so-called chronic mental trouble, why should it not become possible to make this improvement permanent? It seems like hoping too much, and yet when we come across occasional recoveries, after years of shadow, one can not help feeling sanguine of success. It is in the study of toxins we must look for our advances, and the solution of this problem must be found in time.

In this age of bacterial investigation one can not help believing that science will yet throw a flood of light on pathological mysteries in some forms of mental disease, and while it may be urged that, with our present want of enlightenment in regard to some of these problems in pathology, it is empirical practice to resort to such methods as thyroid feeding, still the end justifies the means.

The cases in which the feeding is resorted to should be carefully selected, and no doubt it will be found that the after-treatment plays a most important part. At all events let us have as much light as possible thrown on the subject by patient clinical investigation, and I think it will be found that we have added one more therapeutic resource to the limited number at our disposal in the management of a class of most unpromising cases of mental disease.

THE DIETARY OF THE NEW YORK STATE HOSPITALS.

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Recognizing the necessity for a standard dietary for hospitals for the insane, the Commission in Lunacy of the State of New York, in June, 1893, requested Prof. Austin Flint, the eminent physiologist, to prepare a table of the requirements of the insane, to be based upon the daily loss of material by the organism.

As there were no dietary reports in use exclusively for the insane, in either Europe or the United States, the first report made by Professor Flint was necessarily somewhat experimental. After examining carefully all the data obtainable and taking into consideration the fact that a healthy man, classed as a non-worker, but taking moderate exercise, eliminates about 200 grains of nitrogen and 4,000 grains of carbon in twenty-four hours, while a man classed as a worker eliminates 300 grains of nitrogen and 6,000 grains of carbon in the same time, the following was fixed upon as a suitable daily ration, based upon the exact physiological requirements of each person to be provided for in hospitals for the insane:

Meat, with bone, including salted meats, fresh and salted fish, and poultry.....	12	ounces.
Flour, to be used in making bread and cooking (may in part be substituted by corn-meal and macaroni).....	16	"
Potatoes	8	"
Milk	8	"
Two eggs.....	4	"
Sugar	2	"
Butter.....	2	"
Cheese	2	"
Rice, hominy, or oatmeal.....	1½	"
Beans or peas (dried).....	1½	"
Coffee (green).....	1	"
Tea (black).....	¼	"

This table went into effect in all the hospitals of the State on the 1st of October, 1893, and in September, 1894, each superintendent was requested to make a report of the results of the year's trial, with suggestions based upon the experience thus gained. These various reports were examined by Professor Flint and many of the suggestions contained therein were adopted in the revised table.

Without going into details it may be said, in brief, that the allowance of flour was reduced from sixteen ounces to twelve ounces, one egg was substituted for two, and cheese, which the patients did not seem to relish, was reduced from two ounces to one ounce daily. On the other hand the allowance of milk was doubled, thus giving sixteen ounces instead of eight ounces daily, and the allowance of potatoes was increased from eight to twelve ounces. The use of five-sixths of an ounce of coffee, in the berry and roasted, was recommended in place of the ounce of the green berry, as experience showed that coffee could be better and more uniformly roasted by experts than by the hospital employés. In the purchase of beef it was recommended that one additional fore-quarter be purchased with each whole carcass in order to give an extra quantity suitable for soups and stews. In the matter of mutton, veal, pork, etc., it was recommended to buy the whole carcass instead of special parts only, for, with the different classes to be provided for, nearly every part of an animal can be profitably and economically used. In the purchase of certain other articles, such as coffee and tea, the consensus of opinion, as expressed in the revised report, was to the effect that impurities and adulterations, even when not positively harmful, take away from nutritive efficiency and are not in the line of true economy. It requires but little experience to learn that the waste of flour, milk, butter, etc., of poor quality, involves more expense than the purchase of first-class articles.

This revised report, which represents the accurate investigations of an eminent physiologist, combined with the careful observations of the several superintendents and the practical experience of the stewards and cooks of the various hospitals, contains many valuable suggestions which can not be fully presented within the limits of this paper. It is thought justifiable, however, to make the following quotation:

“Ordinary supplies of meat contain 20 per cent of bone. The meat includes a considerable but variable quantity of fat. Veal should never be supplied unless it is of the best quality. The same remark applies to fresh pork. A calf, when dressed, should weigh about 130 pounds. A young hog, when dressed, should weigh 120 to 140 pounds. A dressed sheep should weigh 65 to 120 pounds. A dressed steer should weigh 650 to 900 pounds, the fore-quarter weighing 190 to 250 pounds, and the hind-quarter 140 to 200 pounds. About 40 per cent may be deducted for salt pork, hams, or bacon.

"One hundred pounds of flour will make 136 pounds of good bread. Corn-meal may be substituted for flour, but to a limited extent, as it is less nutritious and often disturbs digestion. Macaroni may be substituted for flour, but only as an occasional luxury. Bread should be made every day, and what is left over should be used in cooking and not be served again. If bread is made during the night and the baking finished as early as 3 A. M., it may be served the same day. If to be served the next day, it should be baked as late as practicable in the afternoon or evening. If bread is simply warmed through in the oven immediately before serving, the moisture absorbed by the gluten is driven off, and the bread is much more palatable and digestible; but bread should never be dried in this way more than once.

"The use of fresh vegetables in season will permit a suspension or reduction of the rations of rice, beans, and peas, with some reduction in the ration of potatoes. Fresh vegetables and fruits should be used freely. Onions should be used freely in cooking, and should be served occasionally as a separate dish. Turnips, parsnips, salsify, carrots, and beets may not strictly be classed as fresh vegetables, but they may be frequently used with advantage."

Discarding fractions, in the estimates of certain articles, the revised table of supplies necessary for 100 persons for thirty days is as follows:

Meat, with bone, including salted meat, fresh and salted fish, and poultry, total.....	2,250 lbs.
Flour (may be in part substituted by corn-meal and macaroni).....	2,250 "
Potatoes	2,250 "
Milk.....	1,500 qts.
Eggs	250 doz.
Sugar.....	375 lbs.
Butter.....	375 "
Cheese.....	188 "
Rice	94 }
Hominy.....	94 }
Oatmeal.....	94 }
Beans or peas (dried)	282 "
Coffee.....	156 "
Tea.....	24 "

After nearly two years' experience with the table, in its original and modified form, I have no hesitation in saying that I think that, with slight exceptions, it answers the purpose admirably, and much

better than any table with which I have had experience. Of course it should be regarded as very elastic, and frequent changes may be made with advantage to patients as well as to the finances of the institution, when fruits and vegetables are in season and available at low prices. If the various articles mentioned in the table are freely interchanged, a variety of food may be obtained without increasing the cost. This is of the utmost importance, for it is not enough to give the proximate dietetic substances in proper amount, but variety must be introduced by employing alternately different substances of the same class.

In too many of our institutions there are certain dishes for certain days, which soon become known to the patients, so that they know exactly what they are to have before they enter the dining-room. In order to overcome this, Dr. MacDonald of the Dorset Asylum has adopted the plan of having his cook, at the beginning of the week, furnish him with a list of the dinners which can be prepared from the available stores, and from this list he selects seven, and then settles the day upon which each of the dinners which he has selected is to be given. This plan has undoubted advantages and is worthy of trial.

Dr. Flint suggests that flour should be substituted at times, with the object of variety in view, with potatoes, rice, hominy, and oatmeal. Butter and cheese may be interchangeable in the proportion of one pound of butter to two pounds of cheese; eggs and milk in the proportion of two eggs to one pint of milk; and eggs and meat in the proportion of eight eggs to one pound of meat. When fruits, fresh and dried, are used in abundance a reduction may be made in eggs, butter, cheese, and milk. While the table is intended for patients not under extra diet and attendants only, and an addition of 25 per cent in meat, flour, and potatoes is suggested for workers, Dr. Flint says that he thinks that with good cooking and careful management the supplies indicated may be made to cover the entire population of most hospitals. My own experience does not justify this conclusion, for we have had to add the 25 per cent regularly for workers, and so far as milk is concerned we have found the allowance too small. At the end of the first year I suggested that the allowance of this article should be doubled, or increased from eight to sixteen ounces per day, and it was done. I am now convinced that even that increase was less than it should have been, and that an additional allowance of one quart for every ten persons would be none too much. Thus for 1,000 patients the

daily allowance should be 600 instead of 500 quarts. I think we will all agree that in extra diet, which, in spite of our best efforts, is the only department in which much variety can be obtained, there should be no set rules or printed regulations. In many cases of recent insanity the question of diet is one of life or death, or of speedy recovery or confirmed dementia. Supplies from which tempting dishes might be made by an experienced cook should be found among the stores of every asylum, and as milk enters largely into all such dishes it is certainly the one article of diet in the use of which there should be little or no restriction.

The question of the preparation of extra diet is one of great importance and great difficulty. The chief cook is generally too busy with his regular duties to give it much attention, and when there are several kitchens, as there are in a large hospital, a second cook for this special work is not always to be had. In some cases I have solved the question to my satisfaction, as well as to that of the patients, by permitting the woman nurse, who is now one of the regular number of attendants on most of our wards occupied by men, to go to the kitchen in the afternoon when the heavy work for the day is over and prepare such dishes as her patients have expressed a wish for. An omelet, a custard, a chop, or a piece of steak thus prepared often appeals to the dulled appetite of the patient when the regular fare would go untasted. Of course this practice can not be carried out to any great extent, but so far as it can be, it answers extremely well. Another question which to me seems to be of importance equal to that of the kind and quality of food is its service. No matter how well the food may be cooked, or how good may be its quality, if it is served on cheap china, or tin plates, in a large dining-room seating several hundred, where the convalescent must almost touch elbows with the untidy dement, where the fastidious man must sit where he can see the glutton gorge, or where the nervous and timid melancholiac may be startled by the piercing cry of the epileptic, it goes without saying that in many cases the food will go untasted and the strength will wane.

A long experience with associated dining rooms, where large numbers in all conditions are obliged to dine together, has made me unalterably opposed to them. On the other hand, I am also opposed to the ward dining-room which fills the ward with the odor of food and dish-cloths, causes the development of bugs and leads to clandestine cooking on the part of the nurses. My idea would

be to have a central kitchen with dining-rooms divided by sliding doors, or arches and screens, so that not more than a hundred patients in any case would be together. It is easy enough in large institutions to classify patients so as to bring them in groups of one hundred, but when we attempt to put five or six hundred together, it can only result in confusion and dissatisfaction. By the arrangement suggested all the advantages of serving food warm and quickly, of having the work concentrated and of giving the patients the benefit of a change from the ward at least three times daily are had, while none of the disadvantages of herding and indiscriminate mixing of all classes are experienced. I would also have all dining-room work, except the very heaviest, done by women, for I do not believe that men can do such work to the satisfaction of any conscientious superintendent.

The tables should be well furnished and all unusual or peculiar cutlery, such as short-tined forks and knives with only a small cutting edge, should be discarded; there should be table cloths and napkins of good quality on the majority of the tables; wild flowers should be freely used in summer where the conservatory does not furnish the cultivated variety, and, above all, the number of servers should be sufficient to see that the food is served quickly and well. If we can accomplish all this, the question of dietary will be more than half solved, and much of the present dissatisfaction with this part of hospital and asylum management will cease.

THE NEED OF A PSYCHIATRIC SERVICE IN PRISONS.

BY DR. JULIS MOREL,

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Since the inauguration of an alienist medical service in the Belgian prisons I have published several papers demonstrating the urgent need of reform in our penal laws. My views are based on two series of observations, the one made in the penitentiary containing the greater criminals, or those under sentences of from five years upward, the life convicts remaining in the cellular prison only the earlier years of their imprisonment. The number included in this series is nearly three hundred.

The second series of prisoners, whose mental condition was examined, begins with the first official installation of the psychiatric service in our prisons. It includes all classes of prisoners, the life convicts who have passed the first ten years in the cellular prison, and some others who, on account of their health, could not remain longer in segregation. This second series also includes nearly three hundred individuals.

It must be kept in mind that there is a considerable difference in the two series of examinations. While the first includes only the study of the offenders taken haphazard from one cell to another, the second contains those whose mental condition, either from their incoherence or peculiar behavior, or their suicidal tendencies, was suspected by the governors of the prison.

The medico-psychological examination of the first class of offenders and the experience gained in the study of the youthful inmates of a reformatory led me to the following conclusions, which were offered at the meeting of the Medico-Psychological Association of Great Britain at Dublin in 1894:

“Medico-psychological science, which is at present very seriously occupied with this section of criminals, has succeeded in demonstrating that they are neither insane nor absolutely irresponsible. Their place is not in a lunatic asylum, nor in a reformatory, nor in a prison. They should be received into institutions set apart for their special care and treatment. The present accommodation in asylums is not sufficient to receive such cases; and it is undesirable that they should be housed with the insane, on whom they would almost certainly exercise an unfavorable influence. Besides this

they would be a source of constant annoyance to the staff, because of their not being amenable to the same correction and discipline as the usual kind of insane patients. Neither are reformatories nor prisons proper places for such individuals, because, on account of their mental weakness, they can not be classed with real delinquents or criminals. Besides, were they treated as ordinary offenders, they would, on the expiration of their penalty, be restored to liberty, and society would again be placed at the mercy of incompletely responsible persons. Society fails in its duties if it follows such a course, for it owes assistance and protection to these unhappy and incurable unfortunates, and it requires assistance and protection for itself.

"The erection of special institutions would be a defense to society and a boon to the mentally depreciated, especially to those who are but slightly afflicted, and who would be saved from deeper depreciation. Such persons should be objects of prophylactic treatment against crime, and the benefit accruing therefrom would be inevitable. Such institutions would also give shelter to inebriates and persons laboring under allied neuroses; to all psychopaths, mentally enfeebled or degenerate, who have acted contrary to ethics and social laws.

"Society willingly gives assistance and protection to those suffering from insanity. Why should not this charity be extended to those whose moral sense is perverted, who are no doubt more dangerous than the insane? This question is of special importance in relation to youthful offenders.

"The creation of such institutions should contribute *pari passu* to the diminution of insanity and crime and the transmission of vicious heredity, and consequently to the improvement of mankind.

"These institutions, to be effective, should have as large an area of inclusion as possible, and the inmates should be classified according to their intelligence and degree of moral sense. They should receive a course of systematic instruction, and periodically undergo a complete medico-psychological examination. These examinations would settle in a satisfactory and scientific manner the desirability of granting partial or complete liberty. After such a scheme had been in working order for some time, one might expect that consummation devoutly to be wished — a diminution of the population of prisons.

"The International Congress, held at Antwerp in 1892, for the study of questions concerning the after-care of discharged prisoners

and the protection of neglected children, recognized the principle of medico-psychological investigation, and unanimously passed the following resolution: 'That the boarding-out of neglected children should, as a general rule, be preceded by an inquiry into the condition and morality of the parents, the conduct and character of the child; and, when possible, by a period of special observation of the child itself.' It will not be out of place to quote another resolution passed at the same representative congress, viz.: 'That it can not be considered a satisfactory legal enactment which decides the responsibility of criminal children, according as their age is below sixteen years.'

"These resolutions involve the necessity of studying the mental condition of the children (and even of their parents) before entering upon their new education. The pedagogue and the psychologist make no distinction between the different boarding-out systems — private family, reformatory, or special school — but rational and systematic education, enlightened by medico-psychological examination, to be completely successful, must provide for the separation of good and bad elements.

"The best should be permitted to leave the institutions as soon as they are fitted to adjust themselves to ordinary circumstances and to live simply and modestly. The worst — the most degenerate — should be kept as long as possible. They should be provided for by the State, and when they are able to do remunerative work the State should profit by them. In such a community there would always be a certain proportion capable of earning sufficient to counterbalance the expenses of management and maintenance.

"Much useful work of a purely mechanical kind, or requiring but little intellectual capacity, is done by the inmates of lunatic asylums and prisons. Having an enfeebled intellect, capable of retaining only a limited number of impressions, which are not easily diverted, such persons often perform their work better than the average man. We not infrequently find them entirely devoted to their occupation.

"Only the weak-minded — those unable to receive any education — the idiots — would become a perpetual burden on the treasury; and to keep this dangerous and pathological class out of harm's way society would willingly contribute. Moreover, the additional outlay would be met by the retrenchment resulting from a diminution of the prison population — a happy compensation for the State budget. Besides, if those unfitted for education could not be kept

in these institutions, why should they not be confined in lunatic asylums, which already receive many idiots.

"We would again emphasize the fact that the increased expenditure would be more apparent than real. Even were this not the case, may it not be urged that society is responsible for its degenerated products?

"To sum up, in establishing institutions for the degenerate, society would accomplish a threefold task —

"1. Self-preservation and reduction of crime.

"2. Protection for the degenerate.

"3. Marked diminution of defects—inebriety, vagrancy, debauchery, etc.—which are the origin of so many crimes.

"It would be a short-sighted policy on the part of the State were it deterred from entering on such an enterprise because of the huge initial cost. The only possible objection to the establishment of these institutions is that by and by the accumulation of incorrigibles and morally insane grouped together would form very dangerous elements, to combat which special rules would have to be made. As we have the precedent of prisons to guide us, this objection is rather superficial. Experience demonstrates the possibility of maintaining order and discipline in prisons where so many of the moral insane are lodged."

Let me offer the following in support of my views above stated: The ten prisons under my observation contain an aggregate of nearly 2,500 inmates. In four years I have had 288 convicts in these prisons put under my care. Of these, 137 were actually insane, 59 were degenerates or imbeciles, 14 were epileptics, and 5 suffered from other neuroses (hysteria, chorea, hypochondria).

I took careful note of all the possible elements that could be considered as predisposing and occasional causes of insanity, heredity (parents, grandparents, uncles, aunts, and first cousins); internal diseases, such as tuberculosis, cancer, etc., were set aside, the evidence being usually dubious.

Although some convicts were untruthful or refused to testify as to their family criminal record and their heredity of nervous or mental disease, inebriety, and suicide, we ascertained this important fact—that 70 per cent of those of them that were insane, degenerates, or imbeciles suffered under hereditary defects. Nearly 80 per cent of the criminals examined had a history of alcoholic excesses; 88 had a primary school education (reading, writing, and

arithmetic); 106 could read and write, and 80 were illiterate.* Many of the last two groups admitted that they could not keep up at school, and many of them claimed that they were absolutely unable to learn to read or write.

A noticeable feature was the number of those whose moral education had been defective, who had lost their father or mother in infancy, or who had been abandoned by them and brought up by other members of the family or by strangers, especially during the period between their tenth and eighteenth years, just the age when the child most urgently needs an intelligent guide in the formation of his character and his preparation for his future life. The attention is infinitely more active in the child and the youth than in the adult. The man after thirty assimilates less easily what he sees and hears when, from defective preliminary training of the organs of the senses and consequently of the most important part of the intellectual sphere of the brain, he did not keep the activity of these organs.

The proportion of young offenders who are thus deficient is very great. Most of the juvenile criminals are neglected and abandoned children; their parents could not attend to them, either because of poverty or ignorance, or because they were too imbruted themselves to think of their most elementary duties. It is safe to say, therefore, that their immature brains were untrained, they became backward, and unprepared to distinguish between good and evil. Legislators understood this when they founded reformatories and industrial schools, but unfortunately they did not look far enough. They were satisfied with giving the child new surroundings, a new home better than their former one, and resembling a normal one as much as possible. In some countries it is held sufficient to keep a boy one, two, or three years to make him reformed and fit to be returned to society; in others, and these the wisest, young offenders are kept in reformatories till eighteen or twenty-one years old. Even the results of this last method are proven insufficient, as they are not what we ought to expect. *Legislators have forgotten to bring into action one of the chiefest factors, and one that I myself consider the essential point of departure for attaining their purpose.*

Here I may refer to the moral and physiological qualifications of the educators. I will speak of the parents, or those who take their place, of the conditions under which the children are born, often

* In twenty-four of the insane convicts no data could be obtained.

pathological ones, and also of the post-natal pathological conditions. I could dwell at length on this theme, but believe it will suffice to refer to one example to demonstrate all the seriousness of the question. Intemperate, alcoholized parents suffer from pathological lesions in the cerebral cortex especially, and their children come into the world under very different conditions from those of moral and temperate progenitors. In consequence of this pathological heredity, they ought to be the objects of special care to obviate, if possible, the evil results of their unfortunate parentage.

What do we usually see under these circumstances? Degenerate parents, destitute of moral principles, can not give children the ethical training requisite to make them creditable members of society. If they keep their children they are a social waste and candidates for the prisons, the lunatic asylums, and the almshouse. If they are happily separated from their surroundings and placed in an honest family, a school, or a reformatory, there is some hope for them, provided they do not return too soon, but, unfortunately, this can not be assured. Usually the reformatory authorities manage to send them back at the age of eighteen or nineteen, and think they are, in so doing, performing a charitable act. They often hardly trouble themselves to know whether or not the parents are morally and mentally fit to have the further care of their children, or take into account the parental character and home associations as an objection to their release.

What is the value of charity that furnishes no guarantee of definite improvement? The child returns home with, on the one hand, a still defective cerebral organization, or at least one that is not quite up to the normal mark, and on the other, still at an age when the passions are developing and even precocious in these degenerates.

The children of alcoholized parents, and generally those with inferior mental make-up, lack the equipment of conscience that is needed to make them absolutely legally responsible. There are many offenders who show by their antecedents and the results of their physical and mental examination, that their intellectual capacity can not be considered as quite normal, and this deficiency renders the individual less able to govern himself or resistant to evil influences. This is the condition of many degenerates, and the judge, recognizing the state of affairs, usually allows mitigating circumstances.

I have been aware of and regretted this state of affairs for many

years, and I agree with Dr. Koch of Zwiefalten, that the degenerates are only imbeciles in the first degree, so that while not altogether irresponsible, they are not yet fully responsible when under the influence of special conditions, such as emotional disturbance, mental excitement, excessive desires, fright, alcoholic excesses, etc. They always fall under some definite type of mental alienation; they are imbeciles, eccentric, unbalanced; they can not conform to ordinary social requirements, and some of them are so far from the normal as to be unable to acquire or apply to conduct ordinary ethical conceptions.

The proportion of degenerates seems very high when we consider the acts and behavior of the habitual criminals that fill our prisons, but it diminishes very much when we psychologically analyze these individuals and observe the results of the training of feeble-minded children in special asylums. How many children born of degenerate or depraved parents and sent to reformatories have become useful and honest members of society by reason of the special care and culture there received?

When one considers that criminal tendencies are most apparent between the ages of eighteen and thirty, and that an enormous proportion of juvenile offenders are to be classed among the degenerates and are neglected and abandoned children; finally, if one bears in mind that their education has been imperfect or vicious and that therefore they are not to be classed with those brought up in normal and moral ways, ought not one to invoke in their favor a mitigation of their legal responsibility?

Admitting all these facts, legislators can not deny, in a legal point of view, their responsibility, but in an ethical point of view they have to take their part, on account of their mental incapacities. But in the actual situation of affairs, as regards our criminal laws, it is doing them no benefit to give them the minimum sentences, especially if they are habitual offenders. Slight punishments do not reform the degenerate criminal. I believe it to be a duty, especially with young criminals between eighteen and thirty, to give a long sentence, not with the idea of punishment merely, but with the firm assurance, in prisons of proper organization, that during their detention care will be taken that they receive all possible improvement.

At the present time the jurisconsult confines himself solely to the principles of the law; the medico-psychologist holds to the results of the psychological examination and demands at the same

time the punishment of the offender and the betterment of the degenerate, who is often the victim of circumstances and capable of much real improvement.

The realization of the program of the medico-psychologist is only a question of time. The physician proceeds from real and undeniable principles which he adapts to existing conditions. The lawyer, on the other hand, makes the criminal too much an abstraction and only considers the nature and the degree of the crime. The next reform in the law will have to take into consideration both the crime and the offender.

Pending this reform we can greatly improve our prisons so as to give in them to the younger inmates the training their mental and moral condition requires. When this reform is accomplished the doors of our prisons should seldom be opened to receive young offenders of less than thirty years of age. Reformatories should be multiplied, should have more and better classification, more workshops, more individual education should be given, and these establishments should be more like charitable institutions for neglected and abandoned youth. Special care should be exercised in regard to their release, and a certificate from a medico-psychological expert should accompany the discharge.

When all this is done, criminality, beggary, offenses against morals, etc., ought to greatly decrease. Together with a rigid law against inebriety, these reforms should effect a change in our civilization and cause a diminution of the necessary enactments to meet the demands of charity.

In preparing this paper I found it impossible to consider the prisons apart from the reformatories. For my purpose it could not be otherwise, as reformatories contain a large number of young criminals who—more, perhaps, than the prison inmates—deserve our sympathy. It is sufficient, moreover, to refer to my former writings to have the assurance that it is with the youth that I have been chiefly concerned. Is it not through the proper protection of the young that we are to look for the depopulation of our prisons?

If as yet, and in expectation of this happy reform, the alienist can perform an important function in both the prisons and the reformatories, his task will be markedly diminished if the youthful criminal could be the object of more careful preliminary attention in a physiological point of view. He will, nevertheless, still have his usefulness in the prisons, where one daily meets with pathological cases among the criminals.

This paper will, perhaps, have some suggestions to the reader who is interested in the reform of neglected and criminal youth, and if I succeed in extending this interest I shall feel well rewarded. I would be still more pleased if, in their turn, others would carry on the work for the sake of those who too often see prison doors open for them by the fault of others than themselves. If every alienist could be interested and would contribute his small share to the improvement of those defective in intellect and moral sense, within a very few years there would be such an accumulation of facts as would compel legislators themselves to offer them the helping hand.

A FEW DEMONSTRATIONS OF PATHOLOGY OF THE BRAIN AND REMARKS ON THE PROBLEMS CONNECTED WITH THEM.

BY ADOLF MEYER, M. D.,

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at the University of Chicago.

To judge from the remarks that were made by several members of the association on post-mortem pathology, an excuse may be needed for presenting to you several findings without very close comparison with ante-mortem pathology. It may be that the subjects will excuse themselves.

The aim of pathology of the nervous system is, to a great extent, a study of localization. Such it has been and will be for some time to come, and as such it continues to yield remarkable results. It is natural the first question in all diseases is the question, *where* is the disorder? The next question is, *what* is the disorder in the part affected? Physiology and pathology have for centuries had the tendency to change this relation by putting anatomy and localization into a secondary position. You hear of centers in the medulla oblongata, which anatomy did not find as such, and could not verify; but to-day we seem to come nearer a rational insight into the anatomy, and we can trace relations of fiber systems as the bearers of functional connections. It has been anatomy and histology and pathological anatomy that have done the work of exacter localization and exacter study of mechanisms.

That there remains much to be done would be best felt if we should ask ourselves to describe the localization of sensory conduction to the brain, the anatomical and physiological arrangement of the cortex of the hemisphere — the laws of function and vitality of nerve cells and systems of neurons, exceedingly elementary questions, in which we feel that we should know more than is actually the case. The saddest thing would be if we should submit to the idea that we knew enough. It will be our duty to collect systematically whatever may give us a clue for progress and for formulating distinct problems.

There are two points to which I should like to draw your attention to-day. First, there are a few lesions that I wish to mention, trying to show what a variety of abnormalities the nervous system

of epileptics offers, and how some of them can be used for the investigation of certain problems.

The second is a short study of an observation, dealing more with living pathology, the problem of degeneration and regeneration. I can not do these points due justice because it was impossible to bring all the brains, etc., for demonstration, and because the time allowed would not give me any chance to do justice even to the little things I found. The subjects will receive fuller treatment in a later publication.

So-called idiopathic epilepsy, according to most authors, seems to have an absolutely uncertain pathology, as far as microscopical research goes. Changes are found in many instances, but the great difficulty lies in the decision of what is primary and what is secondary. Among twenty epileptics examined, post-mortem, seven showed distinct lesions, several among which can be incriminated as causative of epilepsy. As they will all be described in a special report, a few only will be selected as an illustration of a few problems.

1. Illustration of a lesion of a possibly teratological character.

Case 112, a young man of twenty-four, who had epilepsy from his childhood, fractured his skull during a seizure, and died of the consequences of epidural and subdural hemorrhage. Besides the consequences of the traumatism, there were found two small tumors, one of them a small cyst in the cortex of the middle frontal convolution, the other a small (fibrous?) tumor in the floor of the fourth ventricle.

The cyst has a thin wall of fibrillary tissue, lined on its inside by one or two rows of neuroglia cells, similar to those of the central canal of the spinal cord, though not as closely arranged. The cell row again is lined by a layer of coarse and fine fibers (the processes of the neuroglia cells?). It is uncertain whether the cyst is the end stage of a focus of gliomatosis, as described by Chaslin. Its sharp outline would speak against this supposition; it is probable that we are dealing with a special form of gliomatous cyst.

2. Lesions in a case of epilepsy with infantile hemiplegia.

Case 144, a woman of fifty-six, came to the hospital with what is generally called infantile hemiplegia, characterized by lack of development of the right side of the body. There was a scar attached to a trepanation opening in the left parietal bone. During life the patient had not shown any symptoms of disturbance of vision; she was very abusive and aggressive, and not closely examined.

The autopsy revealed a large cyst extending from a membranous scar in the left ascending parietal gyrus (middle third), through the basal ganglia, to a large defect in the temporal lobe. The middle part of the fourth and fifth temporal convolutions is completely absent, nothing but a membrane forming the wall of the cavity, that extends all through the hemisphere. For the study of epilepsy and its explanation, this brain would almost be of no value. It would belong in the curiosity shop. But it affords a decision of problems of greatest importance in other lines, and is a fine illustration for the usefulness of the study of such lesions in pathology. The degenerations were remarkable for several reasons: It was expected that the cortex over the cyst would have lost numerous elements, because the white matter of the centrum ovale had so extensively suffered. Further, the corona radiata and crus cerebri, the optic radiation and perhaps the fillet, were probably involved. I simply mention a few of the results of the preliminary examination and the problems connected with them.

The Cortex: Although the wall of the cyst was remarkably thin, the cortex did not show any marked shrinkage over the parietal lobe. The breadth seemed perfectly normal, even in those areas where the subjacent white matter was only one millimeter thick; only the deeper parts of the second layer were much rarified, the deepest layer hardly affected at all. Conclusion: The cortex is a remarkable center in itself as a relatively independent structure, far more than a mere shunt for in-and-out-coming impulses. Its histological independence explains the wide range of intracortical activity of which the correlates of psychical activity undoubtedly only represent a fraction.

The interruption of the central motor path, the pyramidal tract, is easily understood. In relation to this, we can study in the cortex which layers give off the fibers of the outgoing impulses, because, undoubtedly, the cells belonging to the motor central path must have degenerated. This part of the examination is not quite finished yet.

The next remarkable point is an atrophy of the optic tract. The lesion had interrupted the central optic radiation, and, contrary to the ordinary expectation, had stepped over the primary ganglia on the peripheral system. Further, we find an important point for the question, where do the central sensory tracts run and end? German writers claimed lately that the sensory path—the fillet—ended in the motor area. This case seems to show that this view

should be modified, since the fillet can be followed into the optic thalamus, and only the connection between optic thalamus and cortex is interrupted.

It would take too much time to enter fully into the importance of these and other degenerations in this case. We certainly realize that the cyst, in itself, was not half as interesting as the degenerations it caused. I should like to make an appeal here, kindly to send such brains for examination to our laboratory in case that they could not be worked out in the hospitals.

3. On examining the cortex of a patient that had died seventy-two years old, quite suddenly, with no other coarse lesion but slight fatty degeneration of the heart and little atheroma, I found a striking accumulation of round nuclei around most of the ganglion cells of the cortex. The condition was most pronounced in the deeper layers of the cortex, and may be described as follows: (Plates 1 and 2.)

The ganglion cells show various degrees of atrophy. Many of them seem perfectly normal, others show shrinkage of protoplasm, and others, moreover, deformities of the nucleus. Round most cells there are a number of round or oval nuclei, arranged in groups or single, many of them imbedded in distinct notches of the cell protoplasm. There was a moderate increase of capillaries, and also accumulation of leucocytes in these, but no accumulation of leucocytes in the sheaths of the blood vessels, as in general paralysis.

The condition seemed very peculiar, and I confess I felt first inclined to make it responsible for the restlessness and maniacal excitement that led to the sudden collapse of the patient. However, in looking over the literature on changes of this kind, there were two sides of the question found treated very fully. The change had been noticed after typhoid fever, and especially after typhus, and was also produced by overheating animals, and, lately, also by starvation.

In 1875 Dr. Leo Popoff described changes in the brain in abdominal typhus and in traumatic inflammation (Virchow's Arch., Vol. 63).

His conclusions were:

1. In typhoid fever, as well as after traumatic inflammation of the brain or middle ear disease, changes occur in the brain that may be called inflammatory.

2. They are characterized by a considerable accumulation in the perivascular and pericellular spaces of wandering elements,

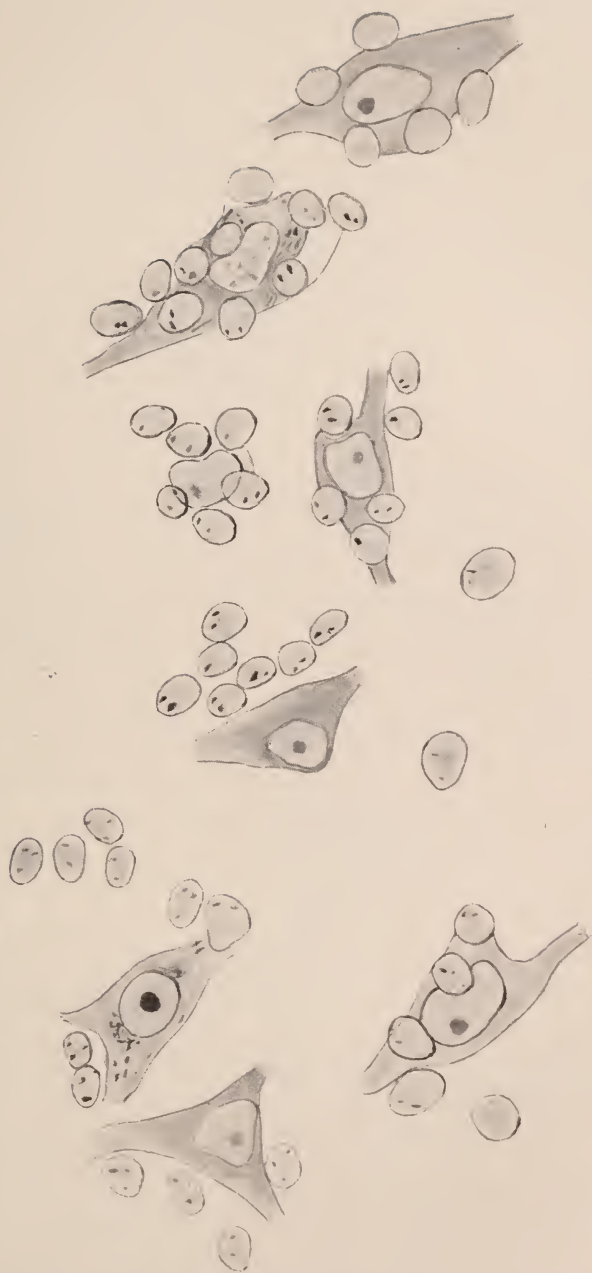


PLATE 1. Cell group from the cortex of the uncus in a senile patient that collapsed suddenly after a period of excitement. Accumulation of nuclei around the cells. Nissl's methyleneblue method.

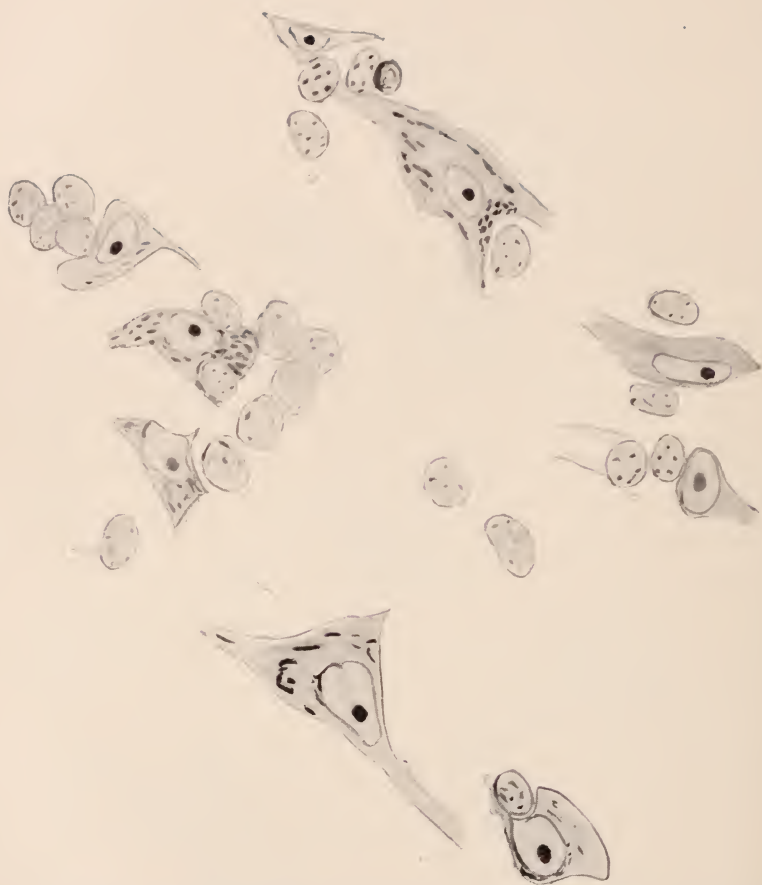


PLATE 2. Cell group from the cortex of the parietal lobe in the same patient. Partial disintegration of cells.

which may even penetrate the cell protoplasm and produce division of the nuclei, which may also occur independently.

3. In real typhus (exanthematicus) the accumulation of wandering elements and the proliferation in the walls of the blood vessels may become so marked that we obtain the formation of a kind of miliary granulation nodules. Also, Iwanowsky (*zur path. Anat. des Fleck-Typhus*, Budneff's Journal for Normal and Path. Histology, 1876) found in fourteen cases of typhus the same condition, accumulation of round cells, but less division of ganglionic nuclei.

Carl, Duke of Bavaria, found accumulation of the nuclei, to a certain extent, in the normal brain (that of a decapitated criminal, and of another person killed by stabbing). Observation on twenty-two brains of patients with typhoid fever seemed to show that the infiltration was most pronounced in the second week of the disease, and especially in those cases in whom œdema of the brain had been observed.

Duke Carl did not observe division of the nuclei of ganglion cells in those cases. Subsequent papers of Stricker and Rosenthal did not promote the knowledge of the condition much. Blaschko (*Über Veränderungen, im Gehirn bei fieberhaften Krankheiten*, Virchow's Arch., Vol. 83) thought even to be justified to range the findings among the normal conditions. In a later paper, Popoff (Virchow's Arch., Bd. 97) reports on similar findings after poisoning rabbits slowly with chloroform and ether, and after exposing them to high temperature, laying, however, less stress on a probable inflammatory character of the findings.

The most important contribution toward the elucidation of the problem has, however, been furnished by Dr. Lubimow. L. starved a dog for a period of ten days so that it lost from 20 to 30 per cent of its body-weight. Then a small piece of brain tissue was removed by trephining and examined. The animal was fed again and brought to its previous condition. Four, six and one-half, and eight weeks after the starvation period, a new opening was made by trephining and brain tissue examined. At the end of the starvation period the protoplasm of the ganglion cells was much reduced, and the nuclei were badly stained. Leucocytes were grouped around them and in some instances, had entered them.

After four weeks' feeding, the animal had returned to its previous normal condition, but many ganglion cells showed progressive decay, many cells had lost most of the protoplasm, others had perished completely; everywhere leucocytes were found around and

also in the cells. After six and a half weeks of refeeding, a finely granulated and deeply stained protoplasm began to accumulate around the nucleus; protoplasmic processes began to form; once, proliferation of a ganglion cell was observed. There were fewer leucocytes around the nucleus, none around the protoplasm.

After eight weeks the processes were still somewhat rudimentary, but in progress of regeneration.

This experiment suggested to me the task of examining the cortex of those who had been afflicted with some wasting disease, and invariably I noticed a remarkable accumulation of nuclei around the cell in these cases, although nowhere as pronounced as in the first one. Continued study will enable us to form an opinion on the relative frequency of these findings. I should not feel ready yet to make any definite statement on this condition in the insane.

It will be the task of further investigation to ascertain whether the accumulation of leucocytes is purely a consequence of the decay of nerve matter, or whether it is a direct help for the regeneration. That is, we must study how much of the increased number of cells is derived from proliferating blood vessels; how many may act as phagocytes, carrying away effete material, and what share they may have in the regeneration of the ganglion cells by entering the protoplasm, etc. I have not been able to find any proliferations of ganglion cells; but if the conditions for such regeneration could be found much would be gained to make the prognosis of alteration of ganglion cells more favorable.

Allow me to use this occasion to mention a few of the problems at least.

We speak of regeneration of peripheral nerves, but for all the ganglion cells we deny a proliferation after birth and therefore regeneration. We are taught that a nervous disorder that can be cured must be functional, that so-called organic pathological processes are irremediable. Again, we are inclined to say that these functional disorders can not be recognized as visible lesions. This is a dogma that deserves to be shaken. In the experiment on the dog and in patients dying after, and from, acute febrile diseases, or in cachexia, we find noticeable changes that are amenable to cure. These changes are apparently the same as those of fatigue described so ably by Hodge, but they must, of course, be somewhat different, since the ordinary repair by rest is not sufficient to effect restoration. They call for a more active reaction. This state is characterized by the disintegration of the protoplasm, and the nucleus and the accumu-

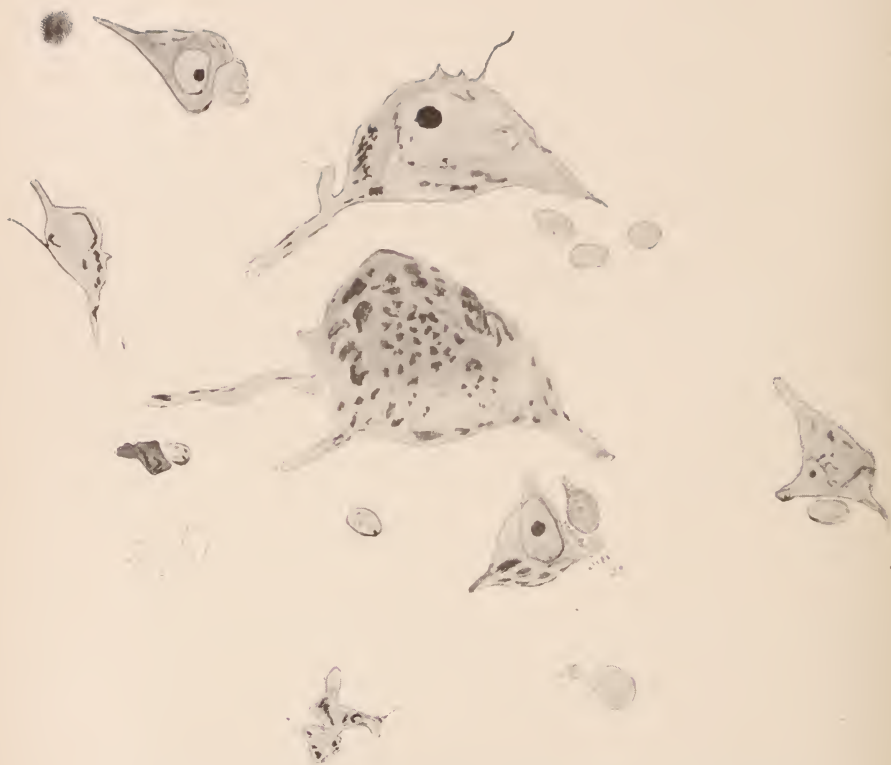


PLATE 3. Cell group from the paracentral lobule in a terminal dement. Advanced disintegration of cells without accumulation of nuclei.

lation of free nuclei, that can sometimes be found to enter the ganglion cells. Under these conditions the reformation of the cells becomes possible and sometimes proliferation of ganglion cells is said to have been noticed. In comparing cells with partial degeneration in a terminal dement (plate 3) with those of more acute changes with leucocytosis, one can not help being impressed with the idea that the leucocytosis offers more favorable outlooks, and that the laws of its influence would be worth continued experimental and pathological research. Whether, indeed, the lucid intervals and the rapid improvement of torpid cases after affections that produce the leucocytosis (typhoid fever, tuberculosis, suppuration, etc.) might be due to the fresh regenerative impulse, will be a question worth examining.

ABSTRACTS AND EXTRACTS.

INTOXICATION IN EPILEPSY.—Voisin and Petit, *Arch. de Neurol.*, April-August, 1895. *Conclusions.*—1. Epilepsy is a hereditary disorder, and its manifestations are connected with a special disposition of the nervous system.

Etiologically it may be divided into two classes—reflex epilepsy and toxic epilepsy.

Reflex epilepsy is not accompanied by gastro-intestinal disorder, and is less serious, while toxic epilepsy is always preceded and accompanied by gastro-intestinal disturbance, and is graver.

Toxic epilepsy may arise either from hetero- or auto-infection. Reflex epilepsy may be transformed into toxic epilepsy and take its symptoms, course, and termination.

In epilepsy from intoxication, when the condition is accompanied by cortical hemiplegia, there is often a kind of spastic tabes or cerebral diplegia associated with the ordinary epileptic dementia.

The treatment should aim at two things—the predisposition and the epileptic attacks.

The bromides react upon the predisposition, but they should be used in varying doses, and be suspended on the appearance of gastric disturbance.

The treatment for the attacks themselves should not be continued through the free intervals.

The toxic seizures may be prevented, and should be met when the premonitory symptoms appear.

In true general toxic epilepsy the poisoning must be checked and the system freed of the toxic products by purgatives, intestinal antiseptics, washing out of the stomach, diuretics, artificial serum injections, hydrotherapy, prolonged baths, dry frictions, and spirit lotions.

DIPLEGIC PARALYSIS IN CHILDREN.—V. Muratoff, *Deutsch Ztschr. f. Nervenhe.*, July, 1895, after a study of several cases, in two of which he had an autopsy, concludes as follows:

1. In spite of the similarity of the clinical symptoms, the pathology of the diplegic paralysis may vary greatly.

2. The congenital form (Little's disease) is connected with meningeal hemorrhage and consecutive atrophy of the central convolutions. The secondary alterations of the pyramidal tracts are, so far as I can say from the study of the single case, to be considered as simple atrophy dependent upon disorders of development.

3. In the hereditary form secondary degeneration, with all signs of a destructive process, is met with.

4. While the clinical observation of Freud is important and instructive, a further analysis of the various forms on a pathologico-physiological basis is still needful.

ANALGESIA OF THE ULNAR NERVE IN THE INSANE.—Cramer, *Muenchener Med. Wchn.* No. 23, 1894, published as the results of studies by himself, that, in the insane, ulnaris analgesia, with few exceptions, was peculiar to paretics, and that it therefore might become an important aid in the differential diagnosis.

W. Goebel, *Neurolog. Cbl.* No. 16, August 15th, gives the result of investigations undertaken to test the correctness of the above conclusion. His method of testing the sensibility was the same as that of Biernacke and Cramer, viz.: pressing on the nerve at the inner condyle of the humerus of the flexed arm, when normally the pain should be felt as far as to the tip of the little finger. In fifty-four male paralytics analgesia was found in forty-seven, or 87.3 per cent as compared with 76 per cent found by Cramer. In twenty-two female paralytics, on the other hand, it was present in only three, or 13.6 per cent.

In the non-paralytic insane Goebel's results differed from those of Cramer, who found a normal condition in 79 per cent. Goebel found normal sensation in fifty-four out of a hundred insane, including cases of stuporous insanity, melancholia, agitated dementia, confusional insanity, maniacs, alcoholics, and epileptics. In the latter the percentage with analgesia was very high (80 per cent). Secondary dementia and paranoiacs were normal.

If the epileptics were taken from among the other non-paretic insane, the percentage of normal reaction more nearly approaches that given by Cramer (79), namely, 63. Cramer examined in his series of non-paretics only three epileptics, which fact may have materially modified his figures.

Goebel concludes, as the result of his study, that in men ulnar analgesia seems to be a pathognomonic sign, useful in the diagnosis of paresis. The cause of the condition may be spinal or cerebral, but it remains to be settled just what its organic basis is. Goebel is inclined to think it may be in the sensory cortical nerve elements.

Baedecker and Falkenburg, *Allg. Ztschr. f. Psych.* LII. Hft. 1, conclude as follows a paper on the same subject:

1. Analgesia of the ulnaris is not to be considered as typical of paresis, and therefore is not available in the differential diagnosis.

2. Ulnar analgesia is relatively frequent in paralytics with disease of the posterior columns.

BRIGHTIC INSANITY.—S. Auerbach, *Allg. Ztschr. f. Psychiatrie* LII. Hft. 2, pp. 337-371, concludes a study of the insanity connected with renal disease with the following:

1. Satisfactory clinical observations, together with post mortem findings, clearly demonstrate the occurrence of pronounced insanity as a result of all forms of kidney inflammation, as well as of other renal disorders.

2. In the great majority of these cases the mental disorder is to be attributed to a uræmic intoxication, and sometimes it is directly equivalent to a uræmic attack. The possibility can not be excluded, however, that in some cases the renal disease is, like any other severe affection, only the general cause of the psychosis.

3. There is no special form of insanity from renal disease, though the

different forms of melancholia are those most frequently observed; those forms associated with systematized delusions seem not to occur.

4. One must be cautious in the diagnosis of insanity from kidney disease, as sometimes other causes — marked heredity, and especially organic brain alterations — may amply suffice to explain the disorder.

5. The prognosis is at least dubious; it improves if it is possible to employ the proper methods for the treatment of the renal disorder.

PRIMARY MENTAL ANOREXIA.—At the session of the French alienist congress, August 5th (*Progrès Medical*, August 17th), M. Paul Sollier described a form of primary non-hysterical anorexia of mental origin, quite distinct in its character from the nervous dyspepsia of Leube. Its prognosis differed also, as the treatment was difficult. Half the cases succumbed to cachexia or tuberculosis. The etiology is *banal*; there is possibly an initial dominant, degenerative taint. While the refusal of food is less absolute than in hysteria, it is more persistent, and the emaciation is rapid. The mental condition is an absolute apathy and disgust with life, without delusions, properly so-called, neurasthenic symptoms or sensory disorders. Constipation is obstinate. The progress of the disease is continuous and recovery rare.

It would seem possible that this might be a toxic form of melancholia due to some failure of organic formation, and the obstinate constipation might in some cases afford a therapeutic indication in its relief.

THE IMPULSIONS OF EPILEPTICS.—At the session of the French association of alienists at Bordeaux, August 3d, M. V. PARANT opened a discussion on the impulses of epileptics. After reviewing the subject in general he concluded that epilepsy is not, by itself, a reason for irresponsibility, but that there might occur with it irresistible impulses, producing absolute irresponsibility, even with perfect consciousness of the act on the part of the subject, and that, aside from this condition, every epileptic not insane or unconscious must be held responsible, with only possible attenuating circumstances.

M. VALLON held that the examination of the act itself must be taken as the true medico-legal criterion. He cited cases in which undoubted epileptics had committed crimes that had no relation whatever with their disease, and in reply to M. Garnier, who insisted on the general attenuation of responsibility of epileptics, he claimed that no such general rule could be maintained—only the study of the particular act would sometimes suffice. The medical expert should show the court the close connection between the disorder and various mental disturbances, which might be a causal factor of crime in many cases, but this was not universal or invariable.

M. CHARPENTIER called attention to simulation and to the absence of constant characters, establishing beyond question the epileptic nature of the impulses. It must be remembered that there was, in some cases, the power of control which was not exercised on account of the patient's confiding in his irresponsibility as an epileptic.

M. REGIS recalled a case where the patient was able even to voluntarily inhibit diurnal attacks.

He also called attention to the need of the consideration of epilepsy in military courts, where injustice was too often the result of the exclusion of medical advice.

TRAUMATIC PSYCHOSIS IN A HORSE. — “*Immobilite*” is the term, it appears, that is given by French veterinarians to a condition which, as Féré points out, is analogous to a form of stuporous insanity. In the case he reports, a healthy, vigorous horse was thrown down an embankment, but seemed, at the time, to have suffered no serious injury. He continued to do his work as usual. After a few days, however, it was noticed that he became dull and apathetic; paid no attention to his surroundings; did not recognize his keepers; seemed even too stupid to eat; was indifferent to his position, and could only be made to move by the greatest exertion. This condition was occasionally varied by dangerous outbreaks of action, after which he became more stupid than before. Gradually he grew worse, almost cataleptic and emaciated from want of food, but was never actually maniacal or vicious. It was finally decided to send him to the butcher, and no autopsy is reported. It is said, however, that in similar cases occasionally a dropsical condition of the brain was met with.

The case is one of some interest, as bearing on comparative psychiatry, and other similar studies would be useful.

THE PUPIL IN EPILEPTICS. — Dr. Wendell Reber, *Med. News*, August 24th, discusses the condition of the pupil in health and in epilepsy, especially the pupillary inequalities (anisocoria) which had been studied by Browning, in epileptics (*Jour. of Nerv. and Ment. Dis.*, 1893). He made two series of observations, (1) one of fifty healthy individuals (recruits) and fifty more troubled with slight reflective anomalies, one hundred in all; and (2) three hundred and forty-five epileptics examined by various observers (Marie, Mosso, Oliver, Browning) and including twenty-two personal observations of his own. All his own cases in both series were tested not only for manifest, but also for latent anisocoria (that observed existing in obscure light and with pupils in a passive condition, while perfectly equal with full illumination). He sums up his results in the following “tentative” conclusions:

1. That pupillary inequality, even of considerable degree, is not always pathologic.
 2. That in order to demonstrate latent inequalities, the occult-motor influence must be as nearly as possible set aside.
 3. That in health latent inequality is more frequent than the manifest form, in the proportion of four to three.
 4. That in epilepsy the latent form of the anomaly is more frequent than the manifest in the proportion of two to one.
 5. That it is only of relative importance in epilepsy, and can occupy but a minor position in building up the objective picture of the disorder.
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THE SENILE PSYCHOSES. — These were the subject of an interesting dis-

cussion at the session of the French congress of alienists and neurologists at Bordeaux, August 1st. M. RITTI, whose communication opened the discussion, included under the head of senile insanities those cases developing at advanced age in persons hitherto free from mental disease. The forms most observed are, in order of frequency, melancholia in its various types, and particularly simple and anxious melancholia, mental confusion, mania, moral insanity, systematized delusional insanity. The anxious form of melancholia is one of the most clearly defined, with its characteristic of anxiety, constant agitation, refusal of food, tendency to vulgarity, insomnia, etc. This form is very curable.

Delusions of persecution, beginning in old age, also have special characters. Their evolution is more rapid, and they are accompanied by visual hallucinations, which are not accidental but form a part of and modify the disease. Paranoia, either of the persecutory or the exalted type, may also occur in old age with the same features as in the adult. We may assume, therefore, that these affections occur independently of mental failure, that they are not necessarily allied to senile dementia.

One symptom of nearly all the senile insanities is erotism, showing itself in words, gestures, etc.

The somatic symptoms are of the greatest importance. Circulatory and cardiac disorders and renal lesions are very frequent. The frequency in the aged of mental confusion is probably due to an auto-intoxication (uræmia).

The study of the psychoses in old age is, after a fashion, the complement of that of the neuroses of old age. The circular and persecutory cases, in particular, reach the extreme limits of life without falling into dementia. Generally it is after a cerebral stroke that the first symptoms of general mental failure appear, but in that case we have to do with organic and not with senile dementia. The legal medicine of old age psychoses is the same as that of insanity in general. Questions as to capacity are more likely to be raised than those of responsibility.

M. VALLON pointed out that the proportion of senile melancholia is greater than would be indicated by the asylum statistics. He had noticed its curability and rapidity of development. Many cases were due to the obvious causes of poverty, hardship, etc., and when these causes were once removed, recovery was prompt.

M. VERGELY (of Bordeaux) gave an account of a type of senile melancholia, without neurotic antecedents, which he had observed in female cases, which in all ended in death, generally from broncho-pulmonary disorder. This type was characterized by visual erotic hallucinations, but with full consciousness of their condition by the patients, which increased their desire for death.

M. MABILLE recognized also the predominance of melancholia in the aged. The form is generally anxious depression and there seems to be some relation between it and the circulatory disturbances through atheroma or cardiopathies. Ideas of negation are rare, and indicate a commencing disaggregation of the personality. The persecutory form of melancholia consisted especially in the fear of thefts, confirmed by the missing of articles through senile failure.

M. CULLERRE reported a case of senile insanity with continuous intellectual exaltation without mental failure. The patient seemed like a degenerate, whose abnormal symptoms only developed with the senile condition, but corresponding historic antecedents were lacking in his case.

M. REGIS reported a case of senile psychosis with voluntarily produced oneiric hallucinations, which the patient himself called his waking sleep. Alongside his normal life there was thus produced a second condition of consciousness that tended to replace it. The patient is euphoric and tends to concentrate himself in his fictitious internal existence. Another aged female has had hypnagogic illusions with painful reaction, now disappeared. This senile type of insanity has heretofore been noted only by Krafft-Ebing, cited by M. Chaslin in his thesis.

M. CHRISTIAN offered a long series of observations of senile insanity, with interesting deductions showing the effect of jealous delusions founded on psychic erotism, existing together with loss of functional genesic power.

THE RELATIVE TOXICITY OF ALCOHOLS.—M. Joffroy reported to the French congress of alienists, August 5th (*Progrès Méd.* August 17th) the results of experiments made by him to ascertain the relative toxicity of the different commercial alcohols. The method adopted by him was the intravenous injection of the substance, using as an anti-coagulant an extract of the anterior one-third of the body of leeches (whose buccal secretion is anti-coagulant) in a solution of salt of 8: 1,000 (eight leeches to one litre). He added to the solution, after assuring himself that it was non-toxic or coagulant, a certain amount of the alcohol he wished to test. The solution itself could be injected to the amount of 200 grams in a rabbit of two kilograms before causing death, the injection being made at the rate of 10 c. c. per minute and lasting two hours. The experiments were made upon rabbits.

The experiments confirmed the law of toxicity laid down by Rabuteau and Dujardin-Beaumetz, and showed that the exception to it in the case of methyl alcohol admitted by them did not exist, this alcohol being less toxic in fact than ethyl alcohol. The difference in toxicity of the homologous alcohols is much greater than indicated by Dujardin-Beaumetz and Audige. Thus, while the least toxic, methyl alcohol has for a toxic equivalent 25, the toxic equivalent of ethyl alcohol is 12, that of amyl alcohol 0.63. Acetone also is highly toxic (5.25), aldehyde still more so (1.14). Furfurol is of all the substances experimented with the most toxic, 24 centigrams per kilogram being fatal.

M. Joffroy next described the chemical physiognomy of the action of these substances. The convulsions due to methyl alcohol are lessened with ethyl alcohol and disappear with the higher alcohols to give place to a comatose condition. He laid stress on the dyspnoic phenomena from furfurol. He closed, finally, with remarks on the toxicity of absinthe; its action differs according to the alcohol with which it is dissolved (it does not cause epileptic attacks if injected in solution in ethyl alcohol).

This method is applicable to testing the toxicity of the commercial liquors: cognac, 1894, 11.41; old armagnac, 11.10; eau de vie from cider, 1894, 10.57; marc de Bourgogne, 9.95; eau de vie from prunes, 1894, 9.41; old

kirsch, 8.40; beet root alcohol of the second distillation, 9.78. The toxicity seems to increase somewhat with the age.

The method can also be used for measuring the toxicity of other liquids.

STOKES-ADAMS DISEASE.—Huebard, *Archives Generales de Méd.*, September, 1895. Conclusions: 1. That under the designation of "permanent slow pulse, with syncopal or epileptiform, or apoplectiform seizures," there has been described a syndrome appertaining to different diseases, and this error of naming contains serious faults of diagnosis, prognosis, and treatment.

2. That under the name of Stokes-Adams disease we should include all the cases of cardio-bulbar arterio-sclerosis, very different from those where the slow permanent pulse is of nervous origin (compression of the upper cord, cerebral and spinal traumatism, compression of the vagi by tumors, etc.).

3. That in the former case, that is in Stokes-Adams disease, there are associated accidents (uræmia, angina pectoris, Menieres' disease, signs of arterial cardiopathy, with tendency to dilatation of the heart and hyposystole, etc.), due to the arterio-sclerosis, while in the second case, that is in the permanent slow pulse of nervous origin, all these are lacking.

4. That the therapeutics is absolutely different in the two cases.

5. That there are incomplete (*frusté*) forms of Stokes-Adams' disease (without permanent slow pulse), with permanent slow pulse, often wrongly considered as physiological, with simple paroxysmal bradycardia or false slow pulse of coupled rhythm of the heart, with attacks of excessive facial pallor, etc., frequently ending in sudden death.

6. That there are also associated forms (with renal lesion, lesions of the coronary arteries and of the myocardium, with sclerous disease of the internal ear, with abnormal or defective chemism in the stomach, etc.).

7. Lastly, that the Stokes-Adams' disease, being only an intermittent claudication of the medulla and heart, the therapeutics should be especially directed to combating the ischæmic and myopragic condition of the two organs.

THE CREMASTER REFLEX IN PARESIS.—Marandon de Montyel, *Archives de Physiologie Normale et Pathol.*, July, 1895, thus concludes a study of the cremaster reflex of some forty paretics of the uncomplicated type, carried over a period of three years, seventeen of whom were followed to the latest phases of the disease.

From these researches we can deduce the following: 1. In the great majority of cases (80 per cent) the cremaster reflex is altered in paretics. 2. This alteration is exceptionally an exaggeration, rarely an enfeeblement, generally abolition. 3. It is more common to find a moderate than a marked exaggeration. Nevertheless the difference between the two is slight (2 per cent), while the moderate enfeeblement is one-third more frequent than the pronounced, which tends to show that the abolition of the reflex follows the most of the enfeeblement with a rapidity not always permitting the recognition of intermediate degrees. 4. The alteration of the cremaster reflex is double in 94 per cent of the cases, and while there is exceptionally a difference between the two sides, the equal type is six times more common than the other. 5. The cremaster reflex is affected from the beginning in

three-fourths of the paretics; this alteration may therefore be useful as a diagnostic means in dubious cases; it is still more frequent as the disease progresses, and so rapidly that there is very little difference between the second and third stages. 6. Exaggerations and enfeeblements of this reflex are rarer after the first stage, or the one is exceptional and the other lacking, while its abolition is constantly more frequent. 7. Moderate and marked augmentation are equally common in the first period, but in the second stage the former are twice as common as the latter; and in the third stage both are lacking, another proof that, with the evolution of the paresis, the characteristic of the cremaster reflex is a tendency to diminution, and this even when in the beginning it is much exaggerated. 8. At the beginning and at the end of the disease, moderate and marked enfeeblements are equal in number, while in the intermediate phases the former are three times the most common; * * at the terminal stage the abolition is so general (90 per cent) that the equality observed in the remainder is of slight importance. 9. As regards inequalities of the right and left sides, they are in a general way inverse to the evolution of the disease, as they diminish from the first to the second stages and disappear in the third. Simple inequalities are equally common in both stages, differential inequalities exist only in the first. 10. The minimum of alterations of the cremaster reflex is seen, in general, in the depressive form, and the maximum in the demented type; the maximum of exaggeration in the expansive and the minimum in the depressive type where it fails altogether; the maximum of the enfeeblements and abolitions in the demented form, the maximum of the first in the expansive, and of the second in the demented type. 11. The changes in the cremaster reflex increase as a rule parallel with the disorders of speech; the same is true of its abolitions, while the exaggerations and enfeeblements diminish, but, in reality, these modifications of the reflex are in relation, not directly with the disorders of speech, but indirectly on account of the evolution of the malady. 12. There is no relation between the exaggerations of the cremaster reflex and the inhibitory action of the brain. 13. The precocity of the alterations of the cremaster reflex has no prognostic significance. 14. It is not possible to establish any connection between the frequency of the alterations of this reflex and the intensity of the motor disorders, since this frequency in about 1.5 per cent is the same in the intermediate and the terminal periods. 15. The cremaster reflex is much more often altered, in a general way, in alcoholic than in syphilitic paretics. In both the frequency of its abolition is the same; while its exaggeration is wanting in the former its enfeeblement is three times as frequent. 16. There seems to be a relation between the alterations of the cremaster reflex and those of tact and sensibility to pain, when these are extreme; in short, anæsthesia and hyperæsthesia, analgesia and hyperalgesia are in relation, as regards their degree, with the enfeeblement or abolition of this reflex. 17. On the contrary there is no relation between the conditions of the cremaster reflex and those of the genital sense.

THE CARE OF THE CURABLE INSANE.—Dr. Charles W. Mayberry, *Am. Med. Surg. Bull.*, September 15th, in a lengthy paper criticises present methods, holding that the curable insane do not derive the advantages due them from

the hospitals as at present organized. But the trouble begins with the general practitioner, who fails to recognize the somatic basis of the insanity and properly meet it, but who delays too long, nevertheless, availing himself of the resources of the hospital. The errors on his part are summed up as follows: (1) Too great delay in sending the patient to the hospital (2) unsatisfactory condition of the patient at the time of admission; (3) insufficient physical examination.

The friends of the patient are also in fault and to be criticised for (1) late commitment; (2) constant interference during treatment; (3) too early removal. In both friends and physician there is a distrust of the public hospital, which is, Dr. Mayberry thinks, justified to some extent by the defects at present existing, such as the size and crowding of hospitals, the defective classification, forcing the patient into unfit and repulsive surroundings, the pressure of executive duties on the superintendent and the inadequacy and incompetence of the medical staffs, the insufficient number of attendants, and their want of training, etc. He criticises the attempts, especially that at Wernersville, that have been made to care for the chronic insane, and recommends the giving up of the present asylums for their use. For the care of curable insane he offers the following propositions:

"For the separate treatment of the curable insane, I would offer the following scheme for construction and organization:

"1. The construction of a sufficient number of small hospitals, the capacity of each to be limited to sixty patients. Each of these hospitals is to consist of several small cottages for the accommodation of not more than eight patients. The location is to be near the largest city in the district for which the hospital is provided, but sufficiently far to allow land enough for our buildings to be reasonably distant from each other, and in no instance are they to be placed near one of the asylums. These small buildings are to be made homelike, but not expensive, divided into rooms instead of wards, with an absence, so far as possible, of iron bars, gratings, walls, and other suggestions of a prison-like aspect, and surrounded by lawns which are neat and attractive. In these buildings are to be placed the means for carrying out the modern methods of treatment—baths, electricity, massage, and gymnasium, as well as the most approved methods of well-regulated mental diversion. Here are to be admitted only the cases of the curable forms of insanity; and since many of the so-called acute cases are essentially chronic from the beginning, the fitness of a case for admission is to be determined by a careful examination by one of the resident officers, and upon his judgment must rest the decision. The classification is to be one of individualization as far as possible, and may rest in part upon the following principles: First, a determination, by constant examination, as to what cases may cause mental injury to each other by contact, and these to be always kept apart. Second, the social condition, habits of life, and moral condition are to be considered. The young of both sexes are to be carefully kept from contact with those who, by their former life and moral condition, would cause the development of impure thoughts and malicious habits, in order that, in the event of recovery, they may be returned to their friends as pure in thought, word, and deed as before their sickness. Third, while those cases which are

intensely excited must of necessity be grouped in the same buildings, for the good of others, yet the moral classification should be strictly observed, and the number of attendants is to be sufficient to prevent harmful intercourse. Fourth, the depressed cases, especially those with similar delusions and feelings, are to be kept apart, and placed among the cases of mild exaltation. Fifth, the convalescents are to be kept apart, still observing our moral classification. Sixth, when a case becomes chronic and is considered incurable, he is to be removed to one of the asylums.

"2. The head of this system, having complete control, is to be an educated and thoroughly competent alienist, who, by his experience in the treatment of the acute insane, will be able to direct all parts in such a manner as to work in unity to serve the one great purpose—the cure of the acute insane. Friction here is to be avoided, for when this occurs, even in the least important matters, some injury is suffered by the patients, and this can be avoided only by a medical officer who is supreme. The superintendents of the hospitals under the present system—men who, by their study of psychiatry, by their long, practical experience in the treatment of the insane, and by their manifest fitness to accomplish the best work under the system here suggested, as they have done under the present system—should be made superintendents and chief medical officers of the new institutions.

"3. A staff of visiting specialists is to be appointed, the members of which are to be called upon to treat, in conjunction with the resident medical staff, those bodily troubles which naturally fall outside of general medical work into a field of the different specialties.

"4. The resident staff is to consist of at least three physicians, fitted by their knowledge of general medicine and experience in the treatment of the insane to assume the duties of their positions, the senior of whom is to fill the position of assistant superintendent. They are to be appointed from the older members of the medical staffs of the asylums by promotion; length of service and ability to be the determining points. Upon them shall devolve the treatment of the patients, careful physical examinations, constant examinations of the morbid mental processes, and the keeping of complete records of the original condition and progress of the case.

"5. The body of attendants is to be made up of young men and women of good moral character, who, besides a sufficient general education, shall have had a course of theoretical and practical instruction in the nursing of the sick and the care of the insane. These positions are to be filled from those attendants of the State asylums who have pursued a course in the training-schools, either already established or to be established, in connection with their work in the asylums, and have received from these institutions certificates of proficiency as trained nurses and attendants upon the insane. The change from the asylum to the hospital is to be in the nature of promotion, with increased remuneration. They shall be sufficiently numerous to give a general predominance of the sane over the insane mind.

"6. The increased cost of the care of the acute cases is to be shared by the State and the poor-district from which the patients come. The per capita cost is not to be limited to any fixed sum, but is to be sufficient to accomplish the best results.

"This is the system of treatment of the curable insane which I would suggest, described briefly and necessarily in an imperfect manner. When, in the developmental process going on in the treatment of the insane, some system similar to the above shall be adopted, all of the limitations suggested in this paper will be removed. The general physician will turn gladly and immediately to the hospital as the most favorable place for the treatment of his patient, as he now seeks the general hospital in cases requiring the attention of a specialist; the friends of the patient—the horror of asylum associations and intercourse with crowds of the demented outcasts and criminals removed—will quickly seek the hospital as a safe and sure refuge in the time of trouble, and even the economist, I believe, will eventually appreciate the advantage of supporting the patient for a short time, even at a greater expense, and having him return to his family and society as a rational and self-supporting man, rather than supporting him for years as a chronic lunatic, and perhaps his family for years as paupers."

THE RELATIONS OF SENSORY IMPRESSIONS AND SENSORY CENTERS TO VOLUNTARY MOVEMENTS.—Bastian (Royal Society, April 5, 1895; reported in *Brit. Med. Jour.*, July 27, 1895).

Bastian can not accept Mott's and Sherrington's interpretation of the fact shown by them that "section of the whole series of sensory roots belonging to a limb," upper or lower, causes lasting motor paralysis in the anesthetic limb. They thought that this proved that "not only the cortex, but the whole sensory path from the periphery to cortex cerebri, is in action during voluntary movement"; but this can not be true, for in complete hemianesthesia, due to lesions or functional defects in the posterior part of the internal capsule, there is no impairment of movement whatever of the anesthetic limbs, at least under visual guidance. The extent to which afferent impressions, and the activity of their related centers, are really needed for the production of voluntary movements must be considered in connection with the cause of this paralysis.

Bastian has long contended that the so-called motor centers in the cortex are really sensory centers of kinesthetic type, which are called into activity by stimuli coming from the cortex (for volitional movements) and from afferent nerves and the lower sensory centers (reflex acts), the true motor centers existing only in the pons, bulb, and spinal cord. As examples of cortically initiated movements he takes: (1) Those of speech, where the auditory center (where thought of words is revived), the glosso-kinesthetic center in Broca's convolution, the proper motor speech centers in the bulb, and the commissural fibers of those centers are so interdependent that a lesion in any part of this tract may cause aphasia (combined with "word-blindness" if the lesion be in the auditory word center). In reading aloud, a fourth center (namely, the visual center) receives the first impressions, which are then conveyed to the auditory word center by commissural fibers. Thus, in the case of a lesion in the visual center, voluntary movements concerned in speech can not be performed at the instigation of the visual, but only of the auditory, sense. Again, in (2) limb movements the visual sense performs the same office as the auditory in speech; that is, the visual and kinesthetic impressions pertaining to the movement are revived there.

In (A) organic lesions, (a) destruction of kinesthetic centers causes paralysis of the corresponding limb, plus loss of muscular sense, and kinesthetic impressions; (b) in man existence of paralysis of limb movements following a lesion of the visual center or of the visuo-kinesthetic commissure is not proved except for writing movements, the destruction of the left visual word center causing complete agraphia; (c) in the lower animals isolation of the kinesthetic centers by section of the fibers connecting them with other sensory centers causes paralysis, as after extirpation of them. Electrical irritation of the centers, however, produces the same muscular movements as before.

(B) Functional defects. (a) Cerebral. Defective nutrition of the kinesthetic centers produces temporary and curable forms of paralysis, mono-, hemi-, or paraplegias, often combined with single or double hemianesthesia. In one class movements can be performed only when the eyes are open (? due to kinesthetic center being capable of being roused by a slightly stronger stimulus). (b) Spinal. Bastian believes the form of paralysis produced by Mott and Sherrington to belong to this class; that is, instead of the lowered functional activity being in the cerebral kinesthetic centers, it is probably in the motor centers themselves in the cord, so that they no longer respond to ordinary volitional stimuli from the cortex; not, as Mott and Sherrington think, that volitional power "has been absolutely abolished by the local loss of all forms of sensibility" in the paralyzed limbs.

This explanation agrees with other facts found in these experiments: (1) That the effects are produced only when all the sensory roots are cut may be due to overlapping of the fields of distribution of the sensory roots; (2) that the paralysis increases from the attached base to the free apex of the limb, to the delicate stimuli going to the smaller muscles of the hand being less likely to rouse the sluggish spinal centers; (3) that forcible and rapid movements, even of the fine joints at the end of the limb, take place if the animals are made to struggle, to the muscles responding to stimuli stronger under the influence of emotion; (4) that movements are produced by stimulating the corresponding kinesthetic centers electrically as easily as in a normal limb, to a profound difference between effects of volition and experimental stimulation of the cortex. At any rate, the latter shows that cutting off afferent impressions by section of the sensory roots does not entail a lowered excitability of the kinesthetic centers in the cortex, but the reverse, considering the lowered activity of the spinal centers, which the absence of tonus implies. In cerebral hemianesthesia, however, there is no lowering of the activity of the spinal centers, and no cutting off of the cerebellar influence, so that the action of the cortex is less interfered with. These differences may explain the presence of paralysis when posterior roots are cut, and its absence in cerebral hemianesthesia.—*Am. Med.-Surg. Bulletin.*

CEREBRAL FISSURES OF TWO PHILOSOPHERS. — Wilder (*Med. News*, July 6, 1895).

In a paper read by title before the American Neurological Association, Dr. Burt G. Wilder stated some results of a study of the brains of two philosophers, Chauncey Wright and James Edward Oliver. These men were

recognized as superior in character and mental power. They were mathematicians, and thought deeply upon the broadest questions. Wright was more a writer and general critic; Oliver was more a teacher of advanced mathematics. The latter was slight in frame and alert in action, the former was large in person and slow of speech and movement. Wright's brain weighed 1,516 gme. (53.50 oz.); Oliver's 1,416 gme. (49.94 oz.). Although above the average of male brains (about 1,400, equals 49.4 oz.), greater weights are not uncommon, even among less intellectual persons. In both the frontal region is unusually high and wide; the unprecedented squareness of Wright's suggests some post-mortem pressure, of which, however, there is no record. In both, the supertemporal fissure is longer than common. Oliver's fissures present several individual variations from the common type, but none comparable with the two rare conditions in Wright's, already noted by Dwight (*Amer. Acad. Arts and Sciences "Proceedings,"* xiii, 210-215, 1877), and by Wilder (*Jour. Nerv. and Mental Dis.*, xvii, 753-4; *Amer. Neurol. Trans.*, 1890; ref. "*Handbook Med. Sci.*," viii, 158-159, ix, 108). The complete interruption of the central fissure has been observed in a dozen cases or more. The simplicity of the fissures and the width and flatness of the gyres are paralleled in the Cornell collection only in the much smaller brain of an unknown mulatto (No. 322, ref. "*Handbook*," viii, Fig. 4, 767). Some approach to this condition occurs in Ruloff, a murderer (No. 965), and perhaps in a German shown by Wagner ("*Vorstudien*," Taf. vi, Fig. 2) after Huschke ("*Schädel, Hirn, and Seele*," Taf. v, Fig. 2). If fissural simplicity and gyral width and flatness are family characteristics, or correlated with Wright's mental and physical deliberateness, then light may be thrown upon the problem by the conditions to be observed in his blood relations or in others similarly "slow but sure" in thought, speech, and act. As a close mate for the brain of Chauncey Wright has not been found in that of James Edward Oliver, the contemplated full account of it need not longer await the death of other moral and intellectual compeers. Such exceptional cases will always command attention. But all estimates of the extent and significance of their peculiarities will be only provisional until the careful comparison of many average brains supplies one or more types or standards. This necessity should be kept in the public mind.—*Am. Med.-Surg. Bul.*, September 15th.

THE PULSE IN INSANITY.—At the session of the American Neurological Association in Boston, June 5th (reported in *Boston Medical and Surgical Journal*), Dr. Theodore H. Kellogg of Willard read a paper on "The Pulse in Insanity—Original Study of Cases."

Dr. Kellogg's conclusions, based upon a study of 2,172 cases, were that there was considerable increase in the frequency of the pulse in both sexes in confirmed cases of insanity. Intermittence and irregularity of the heart, cardiac symptoms, and valvular lesions were found in about 10 per cent of all established cases of mental disorder. Abnormal sphygmographic tracings were to be found at some stage of the disease in the vast majority of cases of insanity. They were due to affections of the cortical and spinal motor and vaso-motor centers, to various lesions of the sympathetic, to dis-

orders of the pneumogastric, to peripheral and central vascular changes, to degenerations of central organs, to toxic agents in the blood, to auto-intoxications, to cachectic and diathetic conditions, to cardiac lesions and to a great variety of intercurrent causes. These abnormal pulse-tracings varied much in different kinds of insanity and in different individuals suffering from the same form of disorder, and they were best classified according to the actual physical status of the patient and the etiology and stage of the mental disorder. No one sphygmogram was pathognomonic of any particular form of insanity, but there were certain general types of tracings which were found in one form of mental disease and not in another. Sphygmographic studies to be of special value should be continued in the same patients throughout an attack of mental disorder, and tracings finally obtained in convalescence should be preserved for comparison. Unfortunately, studies with the sphygmograph were laborious and time-consuming, but they were of such diagnostic and prognostic value in mental disorders that they had already become an indispensable part of the alienistic science.

LESIONS OF THE PONS.—Dr. C. K. Mills of Philadelphia read a paper on "The Localization of Lesions in the Pons." He first presented the record of a case, with autopsy and drawings of microscopical sections. This patient was a man fifty-three years old with a syphilitic history. His intracranial symptoms came on about eight months before his death, the first being paralysis of the left abducens nerve. He had attacks of weakness and dizziness. He showed on examination paresis of the left leg and arm, paralysis of the left external rectus, paresis of the right external rectus, with some restriction of ocular movements to the left. The patient was extremely emotional. No areas of anesthesia discovered. Knee-jerks exaggerated on left side. Examination of the pons and pre-oblongata revealed a lesion by a cut fifteen millimeters carried to the junction of the pons and crus. It was close to the median line, almost entirely in the dorsal half of the pons. Its width in the first state was five millimeters; dorso-ventrally its dimension was about eight millimeters. Sections through the lesion showed an area of degeneration much larger than that revealed when the specimen was fresh. Softened and degenerated tissue was found on both sides of the median line, much more marked on the left. As shown by the microscopical examination, the parts involved in the lesion were the right mesial fillet and pyramidal tracts to a slight degree, and the root fibers of the abducens. In connection with this case remarks were made on the method of localizing small gross lesions in the pons. This method was founded upon a number of cases, most of which had been published. He divided each half of the pons and pre-oblongata into nine segments, three ventral, three dorsal, and three intermediate between the ventral and dorsal. Drawings were shown which were based upon actual sections of specimens. The parts played by the cranial nerves, by the superficial and deep transverse fibers, by the pyramidal tract, the fillet, the various systems of root fibers, and the nuclei of the cranial nerves, and the special frontal nuclei in this method of local diagnosis were shown.

MENTAL CHANGES IN EXOPHTHALMIC GOITER.—Maude (*Med. Press and*

Circ., 1895, LX, p. 228): "I have nothing to say on changes of mental state due to loss of thyroid activity; the psychosis of cretinism is well defined and widely known. But I venture to think that the mental changes of exophthalmic goiter are equally defined and not perhaps as widely realized. If this be so, if there are such distinct types of mental aberration, in marked antithesis to each other, which accompany two pathological states of the thyroid, perhaps also in antithesis, it is sufficient to give the subject a place in our discussion.

"In the bulky literature of Graves' disease I do not find many attempts to describe the ordinary mental condition of the patients; but we find numerous descriptions of cases which have presented definite and severe forms of mania. Such cases are naturally reported largely by pure alienists, under whose charge these patients have been placed; so many histories of this class have been published that they have psychologically overshadowed ordinary cases, and might lead one to the conclusion that mania was a far commoner accompaniment than it is.

"For the purposes of this paper I have taken twenty cases, with whom I am well acquainted, and with whose family histories and mental peculiarities I have been familiar for some years. The questions I wish to especially consider are the occurrence and frequency of definite insanity, and whether short of insanity there is not a typical psychical change.

"We all know that acute mania and melancholia do occur in Graves' disease. No one has described more cases from his personal observation than Dr. Savage; we have, however, no large statistical observations of cases taken at random, from which we can draw any conclusion as to the frequency of severe mental derangement. However, Sir J. Russell Reynolds, in 1890, published remarks on forty-nine cases; he does not mention insanity in any one, so we may fairly conclude none was insane. Of my twenty cases only one could be claimed as at all insane, and she presented a mild form of chronic dementia. I have been informed by one of the officers of one of our largest asylums that no case has appeared there for many years; the meeting will doubtless help us on this point.

"Now, in a large proportion of cases of Graves' disease, there is a neurotic ancestry, and I question whether the proportion of acutely insane patients is greater than it would be among other persons of such heredity who were in bad physical health. I do not propose to dwell on these cases of true insanity; there is nothing peculiar about them. When amentia occurs it is of ordinary type, usually acute, often recurrent mania, or melancholia, while delusions of persecution are very common. M. Raymond Martin, a pupil of Professor Joffroy, collected twenty-eight published cases in 1890, and they present such varied forms of amentia that no conclusion can be drawn from them. One point is noteworthy, and has been insisted on by Hirsche, who collected forty-three cases of insanity, which is that mania in any form is an occurrence of very grave prognosis; only six of his cases attained even temporary recovery. This is not surprising when we consider the cardiac and other disabilities from which these patients suffer.

"Let me pass then to what I consider the more distinctive, though milder, form of psychosis in Graves' disease.

"My twenty cases are all women, about equally divided in age between early womanhood and the sexual decline, all private patients and a large proportion in a higher rank of society than the ordinary hospital patient. As I have said, none (or perhaps only one) could be claimed as insane, but only two present at all normal states of mind. In all but three the intellectual powers have suffered; but two of them are ladies of remarkable intelligence and a high degree of education. Both have been affected over twenty years, though in one the disease is quite quiescent. The other presents at times rather severe symptoms, but is, nevertheless, one of the most cultivated women I know; she is able to work as the administrative head of an important educational establishment, and (besides being an advanced student of philosophical subjects) has persevered at forty-eight years old in the study of Greek and Welsh.

"M. Ball made the remark in 1893 that 'a certain degree of intellectual and moral exaltation often exists.' It is not quite clear from his description what he means by this expression, but I think, if we accepted the words in their literal English translation, as I have given them, that there is a good deal of truth in the remark.

"The mental condition of these people is very difficult to describe, but is in its particularities very highly defined.

"1. They present an extreme motor restlessness resembling that which sometimes accompanies subacute mania and neurasthenia; many of these patients are continually moving their hands and faces, acquire tricks of movement, habit spasms of ordinary type, such as pulling the corners of their mouths, the buttons of their dress, and so on. True chorea is frequently associated with exophthalmic goiter, but has never been present in any of my patients, and has no connection with the sort of movement habit I describe; neither is this restlessness connected with the habitual tremor of the disease.

"2. Another point is the ease with which these persons are startled. A very slight interruption or noise will disturb them for hours; this is generally due to the instability of their cardiac action.

"3. Sensorial illusions are occasionally present without other signs of insanity. Galezowski has described some cases of hallucinations of sight, and Grainger Stewart some of hearing. I have had under observation for many years an elderly woman, who had frequent illusions of hearing, thinks she hears people talking round her or calling out; but I attach no importance to this case, for it is altogether an aberrant one. Moreover, she has some chronic Eustachian catarrh, with great tinnitus and vertigo, and if I were pinned down to an expression of opinion, I should say had mild dementia. She is a very remarkable example of exophthalmic goiter, having developed once a train of paralytic symptoms of the basic cerebral nerves quite unique in the history of this disorder, and at another time, under the stress of alarm, a condition resembling ambulatory epilepsy.

"Vertigo, even of an extreme degree, is a common symptom, and this has been found associated with recurrent mania in at least one instance. I am unable to satisfy myself that this vertigo, in its milder forms, is not due to middle-ear catarrh, as I have found this condition a common one in Graves' disease.

"Now we pass to what I consider the true salient mental changes. These people become irritable, short-tempered, discontented, prone to take offenses at, and quarrel with, anything and everybody. In this they merely present the usual attributes of neurasthenics. In addition the patients become untruthful, suspicious, and intolerant of contradiction or advice.

"The memory becomes much impaired, especially memory of current details.

"But the most distinctive mental change to my mind is that first described by Sir James Russell Reynolds, who gave it the apt name of chorea of ideas. The patient finds it impossible to think of anything consecutively; if she makes an effort to write or talk about anything other ideas crowd into her mind and displace the original one; names and notions often in no way connected with the proper thought crop up instead of the one she wants. A patient of mine found herself unable to cut out pieces of material for needlework, as she used to start cutting out one garment and find she had ended by trying to cut out another sort, a chemise for a skirt, and so on.

"Another mental change I have seen constantly is a morbid sense of duty, an over-sensitive valuation of public opinion, or the opinion of other individuals. This is, I take it, a mild condition of melancholia, but, in my observation at least, it has never acquired the intensity of actual melancholia.

"I have also endeavored in all cases to eliminate the factor of 'hysteria.' The definition of this term is so vague that I have pinned my faith rather to such physical signs as localized anesthetic patches and diminished fields of vision rather than to hysterical crises or so-called hysterical psychosis, and I can only say that my own patients have none of them presented satisfactory signs of hysteria at all. The only physical sign, which is frequently associated with hysteria, and which I have also found frequently accompanying Graves' disease, is *astasia-abasia* in its various forms.

"I am quite aware, however, that any or even all the conditions I have described may occur in ordinary neurasthenics or hysterics, but on viewing these central nervous changes as a whole, and in fairly large numbers, I have been struck by the similarity of the assembled psychic changes as compared with those of neurasthenia and hysteria.

"In fact, some of my patients who have presented in its most typical form the cerebral action of Graves' disease have been farthest removed from neurasthenia and showed none of the physical or mental attributes of hysteria.

"This condition, which I have endeavored so imperfectly to describe, stands, I think, in remarkable contrast to the apathetic mental state of myxedema. And I have discovered another curious little point of dissimilarity in the absence of any olfactory illusions in Graves' disease, which (you all know) are common enough in myxedema.

"So marked is this contrast that we must be led unavoidably to the inference (though we can not yet call it a conclusion) that we have on one side a deficiency, and on the other an overplus, of some material which acts as a stimulus or a toxic agent to nerve structures, and among them the nerve structures which especially concern psychologists."

Asylum publishes in the *Annali di Neurologia*, XIII, 1 and 2, a description of the types of insanity prevailing in the south of Italy, of which the following is his summary:

1. In the asylum at Nocera acute mania and melancholia are not frequent, and almost always are accompanied with hallucinatory impulsive symptoms, and soon show symptoms of decided mental confusion; psychomotor exhaustion in the one, severe distress in paroxysms, that soon reach the condition of anxious fear or settle down into an inert apathy, in the other. Their course is seldom truly cyclical, but is remittent, with sudden aggravations and periods of quiet, simulating recovery.

2. In the said asylum there are first in frequency the sensory, acute delusional types, and those intermediate between these and mania and lypemania. The mass of recurrent or periodical insanities is superimposed upon the sensorial types (especially in males), that in some cases assume the characters of acute delirious attacks with marked hallucinatory symptoms, disorder of acts, lucidity at times notable, at others profound mental obscuration and obstinate impulsivity.

3. The forms of chronic primary paranoia with slight hallucinatory symptoms and permanent lucidity are rather rare; on the other hand, those of rapid progress, with marked hallucinations remissions, phases of agitation and mental confusion are very common.

4. Among the insane at Nocera are found many epileptics and an increasing number of cases of paresis. Almost all the toxic psychoses are wanting.

5. The predominance of the types that commonly go under the name of exhaustive psychoses is possibly due to the fact that the asylum has cared for especially the more dangerous cases (impulsive cases), and those liable to relapses. But still more than this is account to be taken of the character and condition of the patients, largely *contadini* (peasants), therefore not excessively developed mentally; disposed to logical errors and superstition, not accustomed to self-control, and easily exhausted under mental strain.

6. Besides this the peasants, with insufficient alimentation, insolation, malaria, etc., and the peasant women, with prolonged lactation, are predisposed to a certain degree to the exhaustive psychoses.

7. We should also remember that a large number of these patients are degenerates, and therefore specially liable to these disorders.

8. Together with the above we may consider also an ethnic factor, possibly very important, as a variety of the Italian anthropological type more special to the southern region, disposing by temperament to logical errors, vivacity of imagination, and to passionate instinctive explosions.

9. In other respects we do not find any notable difference between the psychopathies of the north and the south, leaving aside the peculiar differences that are based on the ethnic factor, which ought not to be very great between the peoples of the same country. There will be to be looked for graduated differences, hard to name, but not for that the less real.

10. The influence of the ethnic factor will be seen also in its contributing directly to the genesis of the sensorial impulsive types, and in generally accenting certain special symptoms (impulsivity, psychomotor asthenias, hallucinatory tendencies, disorders of representation) in all psychopathic disturbances.

SUICIDE IN EUROPE.—*The Lancet* quotes from statistics concerning the frequency of suicide in the different nations of Europe, which were collected by Prof. Sidorski of the University of Kief. According to these figures the death-rate from suicide per million living is: In Saxony 311, France 210, Prussia 133, Austria 130, Bavaria 90, England 66, Russia 30. During the last thirty years the suicide rate has remained stationary in Russia, while in all other European countries it has increased 30 or 40 per cent. The exact significance of figures such as these is not easily discovered. The patience of the Russian under the worst misfortunes, and his indecision of character which makes him fear to say a word or perform an act which shall not admit of withdrawal, may form much of the explanation of this low rate. Crime is comparatively rare in Russia; the number of persons tried for murder per million living in 1887 was: In Russia 10, Italy 96, Spain 55, Austria 22, France 14, Germany 9, England 6.

CORTICAL LOCALIZATION.—At the session of the American Neurological Association, June 6th (rep. in *Boston Med. and Surg. Journal*, October 10th), Dr. Charles K. Mills opened a discussion on cortical localization in the light of recent researches into the minute anatomy of the cortex. He said that the different theories as to the separate cortical localization of movements and of cutaneous and muscular sensation, which had been the subjects of so much controversy, have again become prominent in the light of the researches founded upon the methods of Golgi, and particularly those made by Ramon y Cajal, van Gehuchten, Schaeffer, Andriezen, and others. Those who contend against the doctrine that the Rolandic cortex is a purely motor region believed they there received additional support for their views. The varying hypotheses with reference to the functions of the cortex were reviewed. He held that, as shown by Forell and Manson, we have been too long handicapped by prevailing ideas of cell action, and by theories of the parts played by the cell bodies as originating centers. Impulses are transmitted and transferred by processes as well as by cell bodies, and the function of the latter is chiefly trophic. The new researches and theories, he believed, did not compel an abandonment of former views as to special localizations, although different standpoints might need to be taken. Disregarding theory entirely, he believed that the subdivision of the cerebrum into physiological lobes—higher psychical, motor, sensory (meaning for the representation of cutaneous and muscular sensations), visual, auditory, olfactory, gustatory, and naming—remained for the practical purposes of the physician and surgeon the best. While the whole of the cortex in some of its strata may be regarded as a sensory expanse, its Rolandic portions, and particularly the convolutions cephalad of the central fissure, constitute a region which is related to specialized movements of various parts of the body. One calls it motor, another kinesthetic, another sensory-motor, and another executive; but for the purposes of the physician and surgeon it is a motor sphere, the irritation of which causes specialized movements, while its destruction impairs or abolishes these movements. It is as much the area where the motor portion of the great sensory-motor arc begins as where the sensory portion of it ends. He did not believe with Andriezen that it was

necessary to regard the ambiguous and great pyramidal cells of this region whose apical processes received the terminals of the fillet radiations as the first sensory cells of the cortex. Indeed, he regarded it as important to rid ourselves entirely of the idea of sensory cells and motor cells. The cortex contains localized areas in which are found cells that might be of the same kind, although cells of a peculiar type may prevail in certain portions of it. To abandon separate sensory and motor localization would, he believed necessitate the abandonment of visual, auditory, gustatory, and other subdivisions of the cortex. The cerebro-sensory area—that is the area of representation for skin and muscle sensations—both cortical and subcortical, would be, from his point of view, that part of the cerebrum where the fillet radiations concerned with these sensory excitations in their most compact forms, are nearest to the surface of the brain, and therefore this region might continue to be destroyed as it had been by him, as in the postero-parietal, quadrate and fornicate convolutions. Destruction of this region, especially if bilateral, caused more or less permanent loss or impairment of sensation. He referred to cases reported by Savill, Sharken, Starr, and McCosh and himself as confirming this view. In the cerebrum as in the spinal cord were fields of junction between the various so-called cortical areas and lesions of these fields of conjunction, or at the terminations of the sensory projection, fibers might give rise to temporary sensory phenomena, as might also lesions anywhere in these fields of conjunction; but persistent sensory disturbances were found only when the lesions involved the convolutions included by him in the general sensory area. The somewhat numerous contradictory cases were capable of reasonable explanation.

Dr. Dana of New York said that he still held to the view that the motor and sensory functions were practically united. He could not explain the clinical and pathological facts upon any other hypothesis. Upon removing a section of the pre-central convolution, tactile anesthesia and muscular anesthesia with paralysis followed, which he thought pointed to the union of these two functions in that spot. Such cases were numerous. He had directly irritated the motor cortex and produced sensory disturbance associated with motor disturbance. The whole weight of clinical evidence, the surgical operations, the tumors, the softenings, indicated that these two functions were essentially identical anatomically. He did not think that Dr. Mills' theory that the centers for visual auditory and gustatory sensations were separate, held against actual facts. The visual sensations were not so closely related to motions as were the cutaneous and muscular sensations. For the performance of coördinated movement must have a very close relationship anatomically between the muscular and cutaneous sensations. He agreed with Dr. Mills that sensations were not closely localized.

Dr. Putnam of Boston thought that the convolutions in advance of the fissure of Rolando, the function of which we ordinarily associated with localized movements, had also to do with sensation. He believed that the function of sensibility was very widely distributed. He thought it was interesting to remember that a sensation would make its way from a minute portion of the spinal cord that was left; and in the brain, if one channel was cut off, it would make its way into other channels. We knew that

nerves would stand a high degree of injury, sufficient to destroy their motor functions, without interfering materially with their sensory functions. The same was true in the cord; a minute portion of it would convey centripetal impressions. Sensibility would seem to be rather peculiar in the fact that it is almost always related to something else. A sensation was felt almost always for the sake of something else.

Dr. Starr of New York said we were positive that a lesion of a limited area of the so-called motor zone did inevitably produce in almost every case more or less disturbance of sensation. He considered that he was mistaken in 1890, when he maintained that sensations were received only behind the fissure of Rolando. He believed with Dr. Dana that there were disturbances of sensation produced by small lesions anterior to the fissure of Rolando, that the sensory area of the body corresponded exactly with the motor area, so far as we could determine clinically. Dr. Starr referred to the address of Flechsig, in which he showed that in the course of development there were two distinct and separate periods of development to be traced in the embryo in the cortex; the first period in which there were formed projection tracts of different kinds, the so-called motor tracts, and sensory tracts of distinct kind, visual, auditory, and olfactory, and also tactile. The latter were distinct and separate from the motor and terminated in areas of the brain separate from the motor and posterior to the fissure of Rolando. Flechsig showed that the second stage of the development of the cortex was an enormous development of association fibers, separate and distinct in the life of the child, because it was only when these fibers began to develop that evidences of the combination of the various sensory memories were shown in conscious intellectual acts. He thought the solution of these apparently contradictory facts was found in the diffusion of sensations. From the Cajal and Golgi methods of staining we knew that the sensory fibers did not terminate in a distinct sensory cell, but in brush-like expansions. Diffusion of sensibility, he thought, explained the fact that in a few cases we got loss of sensations alone, while in the vast majority of cases sensation and motion were lost together. He thought we should come finally to the fact that a cell was to be regarded more as a trophic center than as a motor or sensory cell.

Dr. Dercum of Philadelphia said that, to his mind, the various centers of the cortex, as we knew them clinically and pathologically, were simply highways of ingress and egress to the general cortex. General biological considerations also would negative the sharp differentiation of cells into special functions. Nerve protoplasm reacted to certain forces; and to say that one cell would react to one mode of motion and another to another, was to his mind unphilosophical, and not borne out by general biological considerations.

Dr. Prince of Boston said that a great many cases could be mentioned where excision of a portion of the cortex had not been followed by loss of sensation. He thought if the word center had any meaning, it must mean a portion of brain the function of which was destroyed when taken away. He did not know how to explain the cases alluded to by Dr. Dana, but they might possibly be explained in this way: that the disturbances occasioned

by a lesion in the brain may be secondary, perhaps due to edema or local congestion. We knew that in injury to the hand, for example, the local phenomena were not strictly limited to the seat of the pain; we might have swelling of all the neighboring parts. He did not see why the same might not be true in the brain.

Dr. Knapp of Boston said he thought the whole of our knowledge of the neuron went to show the very pronounced dependence of the motor neuron upon the sensory neuron. In the primary neurons it had been clearly proven that the terminal processes of the axis cylinder of the sensory neuron were closely connected with the apical processes of the motor neuron in the cord. Recent studies in the development of the fibers in the brain itself showed that the sensory tract passed distinctly upward toward the central convolutions rather than downward and inward toward the gyrus fornicatus. In other words, the higher sensory neurons must either pass upward directly to connect by their axis-cylinder processes with the cell bodies of the motor neurons, or there must be associated tracts from these axis-cylinders going up to the motor neurons. Now, we found no association tract passing up from the gyrus fornicatus to the central fissures. The positive cases of sensory disturbances following lesions behind and in front of the fissure of Rolando were increasing in number. The positive cases of lesion in the neighborhood of the gyrus fornicatus were very few.

A NOVELIST who should say that a nail could be driven into a child's brain and remain there without producing any unpleasant symptoms for thirty-two years would be thought to exceed even the license of the romancer. And yet this fact was revealed in the dead-house of the Metropolitan Hospital at a recent autopsy. Among the daily arrival of patients from the city was a man thirty-two years old, of fair intelligence and apparently well formed, suffering from double pneumonia. In forty-eight hours he was carried to the dead-house, and in accordance to hospital rules in all cases of sudden death, in due time a post-mortem examination was made. As the skull-cap was lifted a nail was found which had passed through the skull and penetrated for three-quarters of an inch into that portion of the brain which is supposed to be the seat of thought. The head of the nail was imbedded in the skull, and covered by the scalp with its full growth of hair, showing that it had passed through the soft portions in babyhood. Inquiry into the previous history of the dead man showed that he was a laborer, had lived all his life in New York, had never suffered until the attack of pneumonia from any special disease, was of usual intelligence, and had never complained of headache, and yet during all these years he had carried this nail penetrating into the brain, the rust when removed staining the surrounding brain cells and scaling when touched with a knife from the nail itself. It was one of the strange revelations which the physician meets in the wards and the dead-house of a great hospital, showing how often truth is stranger than fiction.—*N. Y. Med. Times.*

BOOK REVIEWS.

A Text-Book on Nervous Diseases. By American Authors. Edited by FRANCIS P. DERCUM, A. M., M. D., Ph. D., Clinical Professor of Nervous Diseases in the Jefferson Medical College of Philadelphia; President of the American Neurological Association. With 341 engravings and seven colored plates. Philadelphia: Lea Brothers & Co., 1895.

With the very rapid advances in our knowledge of nervous disorders and of the general pathology of the nervous system, a full and comprehensive and thoroughly up-to-date treatise on these subjects has been a desideratum. We have some excellent manuals, but most of them require to be re-edited, and some of the best are rather brief epitomes than exhaustive treatises. It was probably to supply this need, in a measure, that the present work was projected, and in the plan on which it has been constructed it has its precedents in other branches of medical science in text-books by representative authors in their specialties. The present volume is apparently not behind any of those referred to in its practical merits or as a creditable representation of American medical science.

While a volume thus constructed, covering so extensive a class of disorders, might seem to necessarily lack the symmetry and system of a work with a less multiple authorship, and while it might appear that there might be repetitions and even contradictory views, the editor's work has been such in the book before us that, so far as there are evidences of the composite character, they are in no way disadvantages and rather appreciate than diminish its value. The discussion, for example, of the effects of traumatisms on the nervous system in connection with hysteria, is essential, notwithstanding the very able study of the same affections in a separate chapter, which seems to us one of the most sound and satisfactory statements of these important conditions that we have anywhere seen. And such slight differences of views as may occur under the names of the responsible authors can do no harm, and, indeed, would not, in the present volume, be confusing even to a student. On the whole, we may say that we rather like this method of constructing a text-book—its disadvantages are few and are overbalanced by its advantages.

Taking up special features of the work, one may remark the excellent beginning chapter on methods of studying nervous disorders, by Drs. Weir Mitchell, and Dercum, with the appended section on the examination of the eye from the neurological standpoint, by Dr. Oliver. This last, together with the chapter on the disorders of the ocular nerves, by Dr. De Schweinitz, makes about as complete a treatise on these subjects as can be found, barring the examination of the color sense, which receives only the briefest mention. The derangements and defects of color vision have, at times, some possible significance, in a neurological sense, and might well have received more attention here.

As this is especially a work on nervous diseases, it does not trench on the domain of psychiatry to any extent; only the psychoses, for such they are,

of neurasthenia and hysteria are treated at length, and a full discussion of paretic dementia is also given in a special chapter. This and that on neurasthenia are by Dr. Dercum, the editor, and are full and able. In the discussion of neurasthenia, Dr. Dercum adopts the rational pathology, suggested by the recent discoveries of the changes in the nerve cell by Hodge and Gustave Mann, accepting also the possibility of a toxic factor, as suggested by Mosso. In other regards, also, this chapter is fully up to date as to facts and theories, and for its compass is a very satisfactory treatment of its protean subject.

The chapter on paretic dementia is also very satisfactory in the main, but Dr. Dercum has apparently not had exactly the same experience as the writer with the variations of this disorder and the difficulty of separating it from cerebral syphilis. In fact, while specific organic disease can often be correctly diagnosed as such, it is unsafe to positively exclude it in any case bearing the characteristic symptoms of paresis, and, therefore, it hardly seems necessary to make any minute diagnosis. When it is clearly organic and syphilitic there need be no question, but any reasonable suspicion of paresis can not be cleared away by studying the symptoms. The only difference between recent syphilis of the brain (simulating paresis) and the typical disease is that the former may be benefited by specific treatment, and therefore it is rather an omission that no mention of the iodides is made in the paragraphs on treatment. Indeed there may be some use for them in the typical disorder.

The subject of hysteria, with its manifold symptoms and forms, is well treated by Dr. J. Hendrie Lloyd and Dr. Mills, and chapters on cerebral localization and focal diseases of the brain are quite full and contain the most recent acquisitions and theories on those subjects. As regards the more especially neurological chapters we find everywhere very much to commend and very little to criticise. The whole book is the most thoroughly up-to-date treatise that we have on its subject, and should be in every hospital and asylum.

Diseases of the Spinal Cord. By BYROM BRAMWELL, M. D., F. R. C. P. Ed., F. R. S. Ed., etc., with 170 illustrations. Third edition. Wm. F. Clay, 1895.

This third edition of Dr. Bramwell's well-known work is quite a different book from its predecessors. Not only is it considerably enlarged, but has been almost completely rewritten and put in lecture form, so that practically it is almost a new production. The long general introductory chapters with general pathology, etc., are here reduced to only about thirty pages, and the instructions as to methods of examinations and case-taking are omitted entirely. Notwithstanding this, the work is enlarged by almost or quite one-third, the whole space being given to special pathology and therapeutics. We need not consider the book any worse for the omissions thus amply compensated for; it is the more valuable to the practitioner if not containing details that might be useful to the student commencing his studies of the affections of which it treats. In the three short introductory chapters are retained only a general consideration of the subject of the study

of nervous diseases, and a brief statement of the anatomy, physiology, and general pathology of the spinal cord. Then follows directly the special pathology which makes up the great mass of the work, the extension of which, over the previous editions, is evidenced by the more than six hundred pages it takes up. As regards individual subjects we find poliomyelitis (acute, subacute, and chronic) occupying over eighty pages, locomotor ataxia a similar space in the book, and other diseases in proportion. These pages are not, moreover, occupied to any extent with discussions of the literature, but are exhaustive studies of the different forms of disease, full of original observation and deductions and generally sound and acceptable theories, when such are justifiable.

The new matter in this volume, besides the additions to the sections on the subjects included in the former editions, which are voluminous and valuable, are chapters on the myopathic forms of progressive muscular atrophy aside from the pseudohypertrophic paralysis previously included, the progressive muscular dystrophies, including the various types of Landouzy and Dejerine, Erb, Leyden, etc.; Friedreich's ataxia, syringomyelia, and compression myelitis. These are all treated with satisfactory fullness and altogether occupy about one hundred pages of the book.

In the chapters on Friedreich's disease no mention is made of the cerebellar type of Marie, or of possible transition forms between it and the genuine hereditary ataxia, nor does our author seem to recognize as a special entity the spinal syphilis syndrome of Erb and Kuh. The familiar type of infantile spastic paralysis, considered as spinal by Struempel and others, is also ignored or relegated to the cerebral disorders. In these particulars the author gives evidence of his independent views, for he evidently is well acquainted with the conditions, but it might, perhaps, have been as well had he discussed the points more at length. A chapter on syphilis of the cord would not have been out of place, though this infection is mentioned quite frequently in connection with the different disorders. These points are illustrations of the author's method; he does not spend time with the discussion of what he does not consider a positively distinct type, and some forms, like Morvan's disease, that are sometimes reckoned as diseases by themselves, are only incidentally mentioned in connection with the disorders they are to be probably referred to in Dr. Bramwell's opinion. Whatever others may think of this, it certainly gives room for the more complete and thorough discussion of those he considers as incontestibly entitled to rank as diseases, and therefore has its advantages. And as a work of reference it is certainly no disadvantage to have it thus show the personality of the author; while one may differ with him, as some may, perhaps, in his views on the so-called traumatic neuroses, for example, or some other points, one can not help recognizing his originality and ability.

The book is a valuable addition to our medical literature in its present form, which practically makes it a new work.

Sketches for Entering Brain Lesions in Post-Mortems. Edited by PROF. A. KOLISKO and DOCENT E. REDLICH, in Vienna. Fifty plates and nine drawings in the text. Leipzig and Vienna: Franz Deuticke, 1895.

Most of the blanks which are on the market for sketching brain lesions in post-mortems are very small and contain only a limited number of outlines. The ones published by Kolisko and Redlich are a great improvement in this respect and deserve credit for other improvements besides.

The little book consists of eight pages of explanatory text, with nine drawings, showing the distribution of the six chief arteries in the fore-brain and in the basal ganglia. Among the fifty plates there are nineteen different ones, as follows:

Plate I. Lateral and upper aspect of right hemisphere.

Plate II. Mesal aspect of right hemisphere.

Plate III. Lateral aspect of the left hemisphere.

Plate IV. Mesal aspect of the left hemisphere.

Plate V. Island of Reil and Fossa Sylvii, right and left.

Plate VI. Base of the brain with cranial nerves.

Plate VII. Horizontal section through the two hemispheres showing the corpus callosum and the centrum semiovale.

Plate VIII. Horizontal section through the two hemispheres giving the basal ganglia, internal capsule.

Plate IX. The same, a little deeper, giving the classical configuration of the anterior and posterior limb of the internal capsule.

Plate X. Still lower, through the anterior commissure and the subthalamic region.

Plate XI. Transverse sections through both frontal lobes, in front of and through the knee of the corpus callosum.

Plate XII. Transverse section just behind the knee, the other just in front of the anterior commissure.

Plate XIII. One transverse section just behind the anterior commissure, the other through the middle commissure.

Plate XIV. One section just in front of the posterior commissure, and one through the splenium of the corpus callosum and occipital lobes.

Plate XV. Two transverse sections through both occipital lobes.

Plate XVI. Two views of the cerebellum.

Plate XVII. One sagittal section through brain stem and cerebellum, and one drawing of the fourth ventricle with dissected cerebellum.

Plate XVIII. Four transverse sections of medulla oblongata at pyramidal decussation, below and through the striae acusticae and through the nuclei VI and VII.

Plate XIX. Three transverse sections through behind the corpora quadrigemina, the posterior, and the anterior corpora quadrigemina.

Most of the drawings are two-thirds of natural size. The surface views of the hemispheres are especially valuable, because the perspective is neglected and because the sulci are open, so that even small lesions in the depth of the sulci can be readily entered.

The plates are perforated and are easily removed. The price is exceedingly low (\$1). Additional plates can be ordered at \$1.20 the hundred or \$5 for 500, from Franz Deuticke, Vienna. It is probable that the firm can be induced to make an edition with English text and English headings.

A. M.

Suggestions to Hospital and Asylum Visitors. By JOHN S. BILLINGS, M. D., Director of the Hospital of the University of Pennsylvania, and HENRY M. HURD, M. D., Superintendent of the Johns Hopkins Hospital, with an introduction by S. WEIR MITCHELL, M. D.

This little work should be in the hands of all trustees, directors, and official visitors of asylums or hospitals for the insane. More than general hospitals they require the educated critical eye, and this book will do good service in supplying it to a certain extent. It is what has long been needed, for the average visitor has very little idea as to what he or she ought to observe.

In view of developments that are from time to time occurring it might be well to add one or two suggestions that, perhaps, appeared to the authors too obvious to need insertion: Is the medical staff sufficient and adequate, and are the wards undermanned? These are sometimes the causes of some of the most serious evils in hospitals for the insane, and if official visitors could be made to see them as they should, better things might result.

BOOKS, ETC., RECEIVED.

- Thirty-Seventh Annual Report of the General Board of Commissioners in Lunacy for Scotland.* Presented to both Houses of Parliament by command of Her Majesty. Edinburgh, 1895.
- Jahresbericht niederösterreichischen Landes-Irrenanstalten*, Wien, Ybbs, Klosternenberg, und Kierling Gugging, der niederösterreichischen Landes-Irrenzweiganstalt in Langenlois, sowie der sonstigen Anstalten zur Unterbringung geistestoechter niederösterreichischen Landes pfleglinge pro 1893-1894. Ausgegeben vom niederösterreichischen Landes Ausschusse. Wien, 1894.
- The Shattuck Lecture*, 1895. *The New England Invalid.* By ROBERT T. EDES, M. D. Read before the Massachusetts Medical Society, June 11, 1895. Boston: David Clapp & Son, 1895.
- On Uncontrollable Drunkenness, Considered as a form of Mental Disorder, with the only Possible Means of Legally Dealing with such Cases.* By L. FORBES WINSLOW, M. B. and LL. M. (Cantab.), D. C. L. (Oxon.), M. R. C. P. (London). Second edition. London, 1895.
- Fourth Annual Message of Edwin S. Stuart, Mayor of the City of Philadelphia*, with annual report of the President of the Department of Charities and Correction for the year ending December 31, 1894. Philadelphia, 1895.
- Three Cases of Friedreich's Disease (Hereditary Ataxia) associated with Genetous Idiocy.* By M. J. NOLAN, L. R. C. P. I., L. R. C. S. I., Medical Superintendent Down District Asylum, Downpulrick. (Reprinted from the *Dublin Journal of Medical Science*, May, 1895.) Dublin, 1895.
- State of New York—State Commission in Lunacy.* Report of the Investigation of the State Commission in Lunacy and the State Hospitals for the Insane, by the sub-committees of the Senate Finance and Assembly Ways and Means committees. Transmitted to the Legislature, May 10, 1895. Albany, 1895.
- The Chicago Department of Health, the Mayor et al. Civil Service and the Department of Health.* ARTHUR R. REYNOLDS, M. D.
- Report of the American Humane Association on Vivisection and Dissection in Schools.* Chicago, 1895.
- The Liver as an Organ of Elimination of Corpuscular Elements.* By GUSTAV FUTTERER, M. D. (Reprinted from *Medicine*.) Geo. S. Davis, Detroit, 1895.
- Insanity.* By DR. O. EVERTS, Superintendent of the Cincinnati Sanitarium, 1880-1895.
- Was Carlyle Insane? A Study of Race Egotism.* By JAS. G. KIERNAN, M. D., Chicago. (Reprint from *Alienist and Neurologist*, July, 1895.)
- Hypnotism: Its Uses, Abuses, and Its Medico-Legal Relations.* A paper read at the 46th session of the Am. Med. Ass., Section on Neurology, etc., May, 1895. By WM. LEE HOWARD, M. D., Baltimore, Md.
- The Relations of Infectious Processes to Mental Disease.* By CHAS. K. MILLS, M. D., Professor of Mental Diseases and of Medical Jurisprudence in the University of Pennsylvania, etc. (From the *Am. Jour. Med. Sciences*, November, 1894.)
- The Combination of Hysteria and Organic Disease.* By HUGH T. PATRICK, M. D. (Reprinted from *Medicine*.)
- The Flechsig Method in the Treatment of Insane Epileptics.* By L. PIERCE CLARK, M. D. (Reprint from *Am. Med. Surg. Bull.*)
- Report of Two Interesting Cases. Word Blindness; Localized Muscular Spasms, Illustrating Cerebral Localizations.* By J. M. KEMSTON, M. D. (Reprinted from *Am. Med. Surg. Bull.*)
- The Analysis of a Crime.* By JOSEPH L. BAUER, M. D., St. Louis. (Reprinted from *St. Louis Med. and Surg. Jour.*, October, 1895.)
- Some Wards of the State. Epileptics.* By EUGENE RIGGS, A. M., M. D., St. Paul.

NOTES AND COMMENT.

THE COOK COUNTY HOSPITAL (SO-CALLED) FOR THE INSANE OF CHICAGO.—The municipal institutions for the insane of our larger cities present in an acute form the defects which characterize our city governments as a whole. The condition of the insane under corrupt political rule is as much worse as their position is more helpless; since, in the parceling out of places, the lowest and least fit of place-hunters are apt to go to the insane hospitals, as the places there afforded are considered the least desirable.

New York, Chicago, Cincinnati, St. Louis, not to speak of other cities, have in their turn illustrated the truth of the above statement, and just now Chicago is again exemplifying it.

The death of a patient at the Cook County Hospital not long ago, under circumstances pointing to brutal treatment, and the subsequent arrest and indictment of two attendants for the killing, produced such general public indignation that an investigation was held by a committee of citizens appointed by the county board, ladies and gentlemen of standing, but engaged in a task which they could not, with the hindrances encountered, fairly carry out.

One knows not what to believe, inasmuch as the committee presented a majority and minority report, and were divided and defeated in their aims by the factional political differences existing among the county commissioners, but the unprejudiced mind can hardly escape the conclusion that most, if not all, the evils unhappily so familiar were present in a deplorable degree. One has the choice of believing either that the meat contractor delivered tainted meat, or that the meat inspector solicited a bribe, and so with many of the charges and counter charges. It was shown that there was absence of the comforts, or even the necessities, of life in food and clothing, and most of the vices of evil and irresponsible administration were present. There were over 1,100 patients in the care of two ill-paid physicians, who, under a lay superintendent, had no authority in the management, and no power in engaging or dismissing attendants, these latter being often merely the "heelers" of the county commissioners. The proportion of attendants was one to twenty patients. This would perhaps be just as well, if they were all like the specimens exhibited to the public, but one attendant to ten patients is as small a proportion as can be recommended.

It is surprising that conditions were not worse under the system, or lack of system, existing, but the credit belongs rather to average human nature, than to any virtue of administration, for a physical examination of the entire 1,100 patients by the physicians on the committee showed them to be generally well nourished and free from evidences of abuse on their persons. And the civil service examination of the attendants, just held under the new law, revealed a most creditable state of intelligence and good qualifications on the part of the female attendants, although very few of the men could make even a half-way respectable showing. We fear this is not an argument in favor of female suffrage, for the men are in these places largely because they are voters.

The outcome of the investigation was certain action by the county board for creating a board of medical advisers, as set forth in the following extract from their proceedings:

CHICAGO, September 23, 1895.

To the Honorable, the Board of Commissioners of Cook County:

GENTLEMEN: Your special committee appointed, and to whom was referred the resolution of Commissioner Allen in relation to the appointment of an advisory board of physicians for the Insane Asylum, beg leave to submit the following preamble and resolutions as their report:

WHEREAS, It is the purpose of the Board of County Commissioners of Cook County to secure in the management of the County Hospital for the Insane efficient service in all departments thereof, and to provide that, in the treatment of patients therein, the highest and most approved means, appliances, and methods shall be used; and,

WHEREAS, It is deemed expedient in order to obtain the highest degree of service in the management of said institution, that the counsel and advice be had of a board of physicians, eminent in their profession, who are not county employes, and who have no pecuniary interest in the management of said institution; therefore, be it

Resolved, 1. That an advisory medical board composed of three physicians, eminent in the medical profession, be and the same is hereby established; said board to be known and designated as "The Supervising Medical Staff of the Cook County Hospital for the Insane."

2. That the said supervising medical staff is hereby authorized to determine upon and formulate rules and regulations for the treatment and care of the patients in said hospital, and for the control and management of the resident physicians, nurses, and attendants in charge of patients in said hospital, prescribing in said rules the duties and obligations of said physicians, nurses, and attendants.

3. That the said rules prepared as above shall be submitted to the Board of County Commissioners, and upon the approval thereof by said county commissioners shall be and become of force and effect, and be binding upon all the employes, physicians, nurses and attendants at said hospital, from

and after such approval, and shall be enforced by the superintendent of said hospital or asylum.

The resolutions further provide that the advisory board shall have authority to examine and report to the board upon the condition of the hospital in every particular, and see that the rules and regulations are enforced. It also provides for four physicians instead of two as heretofore, and requests that the civil service board will have applicants for places examined by the advisory board, and continues as follows:

7. That Dr. Richard Dewey, Dr. Sanger Brown, and Dr. Archibald Church be, and they are hereby, selected as the members of said supervising medical staff of said Cook County Hospital for the Insane, to act in said capacity from the first Monday in October, 1895, until the first Monday in October, 1896.

The above action, so far as the advisory board is concerned, has had no result as yet, for the reason that two of the members reported their inability to serve — Dr. Dewey by reason of residence in Wisconsin, admitting of only a limited time weekly in Chicago, and Dr. Church expressed doubts as to the practicability of the proposed plan.

It is earnestly to be hoped that a successful plan of reorganization may be carried out, and the new civil service law gives encouragement that a newer and better day may dawn upon the unfortunate insane wards of the county of Cook; but any advisory medical board which is appointed, in order to effect the desired result, must have authority in itself to enforce its recommendations.

THE INTERNATIONAL CONGRESS ON THE ABUSE OF ALCOHOLIC DRINK, held at Basle in the beginning of September, was notable in that it brought out some important facts in support of temperance. A number of the continental physicians in attendance avowed themselves as opposed to even moderate drinking, and some proclaimed themselves as practical abstainers. Forel of Zurich was, of course, one of these, as his previous writings have indicated. Dr. Bode of Dresden was another. Some interesting experiments as to the effect of alcohol on the capacity for mental labor were reported, which had been made in the physiological laboratory at Heidelberg, some of them, we believe, under the auspices of Professor Kraepelin or his assistants. They gave the result of demonstrating that the consumption of even small doses had a tendency to paralyze or impair the mental faculties.

Dr. Legrain, the well-known Paris alienist, gave it as his view

that insanity in France has increased directly in proportion to the amount of alcohol consumed, and that the increase of mental diseases was mainly due to drink, it being most marked in those parts where the consumption of alcohol was greatest.

While these views are not at all new in America, or to some extent Great Britain, it is significant that they are gaining ground in Germany and France. Temperance advocates will be able to find much to their satisfaction in the reports of this congress.

THE ENGLISH LUNACY COMMISSIONERS, in their latest report, publish the statistics of the ages of patients admitted to asylums, which, as the London *Lancet* points out, have an interesting bearing on the ever-living question of the increase of insanity in recent times. Thus in 1883 the figures show that the admission of those over sixty were 12.5 per cent of the whole; in 1888 this percentage had increased to 13.2, and in 1893 to 14.7. So far as this percentage goes it can not be considered as an evidence of the increase of acute insanity, but rather of the transfer of cases of senile failure to asylums. The larger the proportion of this class, therefore, the less probably do the figures show any actual increase of mental disorders. In England it seems that this proportion has steadily increased.

The three censuses of England — in 1871, 1881, and 1891 — which are probably as reliable in their figures as any official enumerations of the kind, show that the ratios per 1,000 of the population of cases of insanity under the age of forty-five were in those years respectively 2.24, 2.27, and 2.26, indicating that insanity under this age limit increased only *pari passu* with the general increase of population. Above this age, however, the ratios were 6.35 in 1871, 7.40 in 1881, and 8.02 in 1891. Some of this increase was doubtless due to the aging of well-kept asylum patients, some to an increased estimation, if not an actual increase of the number of senile cases. The figures of the commissioners' report, however, indicating as they do only new admissions, show actual relative increase of the asylum population of this class.

A similar general study of the asylum statistics in this country would be of much interest, especially in those portions where the population is most stable, and which can be assumed to have attained their full growth.

LOUIS PASTEUR.—Although not an alienist, Prof. Louis Pasteur was so eminent in science that a notice of his life and works is not out
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of place in a journal of any specialty in medicine. Moreover, we are only beginning at the present time to learn the relation of his discoveries to mental as well as to other diseases, and to apply the acquisition thus obtained to their cure, though we do not in so doing often recognize the indebtedness to this single-hearted scientific worker that psychiatry, with every other department of medicine, really owes.

The Boston *Medical and Surgical Journal* justly compares Pasteur to Darwin as at once able to accurately observe and to comprehensively generalize on the facts collected, the latter a much rarer and higher ability than the former. Unlike Darwin, however, he did not have to confess that his studies had cut him off from the appreciation of higher things; he was not, so far as known, narrowed by the nature of his labors. While it may not appear to some minds a recommendation for a scientific man to acknowledge himself a Christian believer, it certainly reveals a modest recognition of the limitations of the human intellect, and is an evidence of a certain breadth of human sympathies. Louis Pasteur showed these also in other ways; while he carried no prejudices into scientific matters, he was intensely patriotic, a virtue that most men appreciate, though some claim to be above it.

He will be remembered as one of the few who in any age will be considered great in the highest sense as benefactors of their race.

A RELIC OF THE OLD IDEA of the divinely inspired or demoniacal possession theory of insanity is shown in the following editorial note from a leading and generally very creditable medical journal:

"Those who have had much to do with the care of the insane have been struck with a clairvoyance so marked in some cases that the patient seems to be able not only to read your own thoughts, but to tell with surprising accuracy what is going on in other parts of the building, or even in their distant home. This fact has been so often noticed by the expert that the clue furnished is considered of too much importance to be dismissed without inquiry as the disjointed and random utterances of an unbalanced mind."

It is more than doubtful whether there are many, or any, real experts who seriously consider the here alleged phenomenon, or would attempt to give it, if really apparent, anything more than a very commonplace explanation.

We notice the editorial note here only as an additional evidence of the curious ideas that are still extant, even amongst generally fairly sensible individuals.

THE ILLINOIS SUPREME COURT recently rendered a decision of no little interest, from the standpoint of forensic psychiatry. Some four years ago a boy, during an attack of epileptic frenzy, killed his father. The atrocity of the act created considerable public indignation, and aroused the suburban region of Chicago in which the crime was committed to such an extent that the homicide narrowly escaped lynching. During his confinement in the county jail his mental condition became so demonstrably abnormal that the State's attorney, at the instance of lawyers appointed by the court at the time of the homicide's first arraignment, had him tried for insanity, because of his obvious incapacity to plead. The jury, on the testimony of Drs. Moyer, Kiernan, and Spray, committed him to an insane hospital. The only property left by the deceased to his son was a life insurance policy drawn in favor of the homicide. Suit was brought against the company which issued the policy because of its refusal to pay the same. The lower court decided against the company. The case was then appealed to the Appellate Court, which reversed the decision of the lower court on the ground that the decision was against public policy, and that it would tend to encourage murders for life-insurance money, with a view to afterward using the plea of insanity as a means of benefiting by the murder. The case was then taken to the Supreme Court, which reversed the decision of the Appellate Court and sustained the lower court. The decision, rendered on the principles laid down by the court in the case of *Hopps vs. the People* some years ago, was logical, since the insanity of the beneficiary of the policy admitted of no question, and it was equally demonstrable that he was an incurable case.

THE newspaper industry of feigned insanity, which has given conscientious superintendents considerable trouble, has received a severe blow in California. An enterprising San Francisco reporter feigned insanity, was tried by a jury and sent to an insane hospital. On discharge from the same, by writ of habeas corpus, he was arrested by the officials of the court before which he was tried for insanity, for contempt of court. The judge of the court then fined him \$250, on the ground that such sensational performances brought judicial proceedings into contempt, and that no alleged desire for public welfare justified them. The newspaper to which the reporter belongs has generously left him to pay the fine, and thereby checked what threatened to be a thriving California industry.

THE RECENT MEDICO-LEGAL CONGRESS in New York was a noteworthy gathering in several respects. As might, perhaps, have been expected from its miscellaneous composition and the range of its subjects and discussions, it excited rather more interest on the part of the secular press than is usual with gatherings of a strictly medical and scientific character. Some, indeed, of its papers were such as might well excite comment on account of the radical positions taken by their writers, and in one or two instances the term "medico-illegal" would better fit their sentiments than the name adopted by the congress. While Dr. Forbes Winslow maintained in a general way the irresponsibility of suicides (a popular notion that has some important medico-legal bearings, and one which we can not unconditionally support), and therefore deprecated the enactment of laws against self-destruction, Mr. Gustave Boehm took the opposite view, that the act was one of ripe judgment and common sense, and therefore drew the same conclusion as to the unreasonableness of its legal condemnation. Another lawyer read a paper on euthanasia, in which he declared that it was the moral duty of physicians to end painlessly and quickly the sufferings of those afflicted with incurable disease, and stated, as of his own knowledge, that such was the practice of reputable physicians. It would not have been astonishing if, with the advocacy of such views, some ardent Malthusian had read a paper advocating systematic production of abortion, or perhaps, in consideration of the maternal perils of such a practice, the return to a Spartan system of infanticide. With these, *par nobile fratrum*, there was a communication from a legal mind insisting upon full judicial inquests in all cases of insanity, and claiming that safeguards such as those of the New York laws are insufficient to protect the liberty of the citizen. This question of commitment of the insane is a two-sided shield, which always has been, and always will be (till the millennium comes), provocative of the most contrary opinions, according as it is looked at from the standpoint of public policy or that of individual interest, the latter having regard to the patient's own welfare and that of all others related to him, as members of his family, participants in his estate, or indifferent citizens who require justice and protection in the operation of law.

It is unnecessary to say here that there were numerous valuable papers contributed to the congress, that were more in the line of accepted thought and opinion than those here mentioned.

THE NEW McLEAN HOSPITAL.—The opening of the buildings for the new McLean Hospital, moved from Somerville to Waverly, Mass., occurs too late to admit of an account, in this issue of the *JOURNAL*, of the new establishment. We hope, however, in the next number to present a description, with illustrations, which will do justice to the important and interesting features of this the most splendid example of what can be accomplished by a fortunate conjunction of great financial resources, enlightened benevolence, keen, practical sense, high scientific attainments, and conspicuous constructive ability—all concentrated upon the single purpose of producing, at once, an agency of highest curative efficiency and a home, in the true sense of the word, for the insane.

We congratulate Dr. Cowles upon the fruition of years of earnest and disinterested activity. His responsibility has been heavy and labor arduous in proportion to the magnitude of the undertaking.

THE "HOMICIDAL CRANK" QUESTION.—We are glad to note increasing interest in this subject—an interest which the *JOURNAL* has labored, in and out of season, to foster—and which the profession and public generally need to have expounded to them, line upon line, precept upon precept. Dr. C. B. Burr, of Oak Grove Hospital, Flint, Mich., at the late Mississippi Valley Society meeting in Detroit, presented an able study of the issues involved; in the present number of the *JOURNAL* Dr. C. E. Riggs gives us an interesting review of British methods in dealing with insane criminals, which we commend to the attention of our readers (p. 161), and Dr. Jules Morel (p. 235) has a valuable paper bearing on the frequent association of insanity and crime in the Belgian prisons.

We can but again state what we consider the essential requisites of satisfactory criminal lunacy administration—the placing of the responsibility of the custody, control, and enlargement of all criminal insane persons in the hands of a government board whose membership shall ably represent law, medicine, and the practical and benevolent issues involved, which board shall alone decide upon the question of enlargement of any insane criminal. We believe that the public (which in the last analysis determines all policy) will never take a reasonable attitude with regard to cases of homicidal cranks till a safeguard of this kind exists, and until it is settled beyond peradventure that an enlightened and competent control will be exercised of all criminals who are either convicted or acquitted of crime on plea of insanity.

CORRESPONDENCE.

THE PRESENT SITUATION REGARDING THE COMMITMENT OF THE
INSANE IN WISCONSIN.

MILWAUKEE HOSPITAL FOR INSANE,

September 26, 1895.

To the Editor:

SIR: A most unusual state of affairs prevails at the present time in Wisconsin, with reference to the commitment of the insane, viz., the absence of any law providing for such a process. About one year ago the judge of the circuit court rendered an opinion to the effect that the law relating to the commitment of the insane was in direct conflict with the Constitution. This decision was based on the ground of its being, in the first place, a purely *ex parte* affair; that the action was not a "due process of law," inasmuch as the alleged insane person was granted no opportunity for hearing and defense. Following upon this decision the judges of courts of record in this county declined to act, and for a time the situation became very distressing to relatives who desired their afflicted ones cared for, great hardship being experienced by both patient and relative. Later the circuit judge permitted his court commissioners to act under the old law, and such is the condition at the present time that one of the many court commissioners alone signs commitments in these cases. Inasmuch as the decision of the circuit judge has not been passed upon by the Supreme Court, and no action was taken by the Legislature which convened last February, the matter is in an unsettled state. Further an amended law was submitted to that body at its last session, was passed to the second reading and referred to the Committee on Judiciary, but through an oversight was not presented for a final reading and action, consequently we stand to-day in a position where we are practically without any statute governing commitment in insane cases, as the old law is declared unconstitutional, and the judges of other courts refuse to take action, and no substitute or amended law has become operative through the neglect of the legislators. This is truly an anomalous condition which is presented and one which is working serious hardship in many cases in need of restraint and treatment in a proper place. There seems no remedy available for the next eighteen months, at which time the Legislature will again convene.

The text of the new bill submitted to the last Legislature provides for the appointment of a guardian *ad litem* for the alleged insane person, who shall be a regular practicing attorney. The judge to whom application is made shall appoint two disinterested physicians to examine the alleged insane person; they shall give notice to said guardian *ad litem* of the time and place of their meeting for that purpose. It shall be the duty of such guardian *ad litem* to be then and there present at such examination and assist in conducting the same should he deem it necessary. If the guardian *ad litem* of such alleged insane person shall not be satisfied from such report of the examining physicians, as well as from his own personal examination of such person, that such person is insane and should be so committed, he shall have the right to demand that the question of the sanity of such person be tried by a jury, and when such demand is made, the judge shall forthwith enter an order for a jury trial. The form of procedure shall be the same as in trials by jury in justices' courts, and the trial shall be in the presence of the person supposed to be insane, his immediate friends, and the medical witnesses, and shall be conducted on his behalf by said guardian *ad litem*, and such counsel as may be employed by said guardian *ad litem*, or such alleged insane person; all other persons shall be excluded. The physicians appointed for the examination of such insane person shall be entitled to a fee of \$3 each and 10 cents mileage. The guardian *ad litem* shall be entitled to \$10 per day for each and every day he may expend in the proceedings. The jurors shall be entitled to the same pay and mileage as jurors in justices' courts. The fees of every county judge shall be the sum of \$5 for each and every day actually engaged in such examination.

Since the present chaotic condition has existed one inmate of this hospital has secured his discharge on a hearing, by writ of habeas corpus, before a court commissioner. The patient was released by order of such commissioner on the ground that the proceedings under which he had been committed had been declared null and void.

M. J. WHITE, M. D.

MILWAUKEE HOSPITAL FOR INSANE, WAUWATOSA, WIS.

REPORT ON THE VOLUNTARY COMMITMENT PATIENTS RECEIVED INTO
THE ILLINOIS HOSPITALS FOR THE INSANE SINCE NEW LAW WENT
INTO EFFECT.

The following is a report by Dr. A. L. Warner of the Illinois Eastern Hospital for the Insane at Kankakee, upon the subject of "Voluntary Commitment" in the State of Illinois:

Section 27, Lunacy Law, 1893, provides that—

"Any person who may be in the early stages of insanity who may desire the benefit of treatment in a State or licensed private hospital for the insane as a voluntary patient, may be admitted to such hospital on his own written application, accompanied by a certificate from the county court of the county in which such applicant resides, stating that such patient is a private or county patient, as the case may be, and such person shall, if admitted to a State or licensed private hospital for the insane, have the same standing as other private or county patients: *Provided*, that all voluntary patients shall have the right to leave the hospital at any time on giving three days' notice to the superintendent."

The following statement shows the use made of the law from July, 1893, to September, 1895:

Number of voluntary cases received in the Illinois State Hospital for the Insane to date:

Eastern (Kankakee).....	17
Northern (Elgin).....	6
Central (Jacksonville).....	3
Southern (Anna).....	0
	<hr/>
	26

Voluntary cases in State institutions at present date:

Eastern Hospital.....	3
Northern Hospital.....	2
Central Hospital.....	1
Southern Hospital.....	0
	<hr/>
	6

Voluntary patients who were discharged upon giving legal notice, but afterward recommitted under other form of commitment:

Eastern.....	3
Northern.....	2
	<hr/>
	5

Form of insanity in voluntary patients:

Melancholia.....	12
Paralytic insanity.....	1
Paranoia.....	4
Alcoholic insanity.....	3

Epileptic insanity.....	2
Misophobia.....	1
Mania.....	1
Not classified.....	2
	<hr/>
	26

Mental condition at time of discharge from hospital:

Recovered.....	4
Improved.....	4
Stationary.....	12
	<hr/>
	20

Conclusions: This form of commitment has found but little favor among those who have had an opportunity to study the practical workings of the same. Among the chief objections are the following:

1. Many patients are shamefully deceived by their friends and others as to the true nature of a hospital for the insane, and are led to believe that they will be permitted to have privileges that can not be allowed them under the law ("and such person shall * * * have the same standing as other patients"), and when they are received into the hospital and find things different from what they had been expecting, become dissatisfied and "give notice" to leave.

2. Voluntary patients are not, as a rule, as amenable to treatment as patients received under other forms of commitment, and are inclined to attempt to dictate as to their treatment and as to what privileges they shall have, etc., threatening to "give notice" if their wishes are not complied with, and cause discontent among the other patients by their influence.

3. Voluntary patients received in a quiet and comparatively rational condition may later, in the course of their mental disease, become worse and "give notice" at a time when their condition unfits them to be at large.

4. The expense and annoyance of returning to the county for recommitment by jury trial or commission of physicians, such patients as have given notice (as mentioned in conclusion 3), and the injurious effect upon the patient resulting from such procedure.

5. The influence of the patient's knowledge that his release from the hospital is dependent upon his mental improvement and the decision of the hospital superintendent based thereon, rather than on his individual action in giving "three days' notice."

6. It gives an opportunity for malingerers and vagabonds to be lodged, fed, and clothed at an expense to the State and counties.

7. Nothing is gained under this form of commitment that can not be obtained under "a commission by two physicians," as provided in the lunacy law of 1893, with the exception of the privilege of release on "three days' notice."

[The adverse conclusions stated by Dr. Warner will hardly bear a critical examination. The first one, that patients are "shamefully deceived," applies to other methods of commitment as well. The second, the disposition to "dictate," applies generally to the insane. The third, "to give notice," need not disturb the doctor; he simply lets his patient go when the three days are up, and it seems to us that the discontent among other patients caused in this way is but as a "drop in the bucket" of discontent so unavoidable in this life, both inside and outside of insane hospitals. The third objection, that voluntary patients had subsequently to be committed against their will, leaves these cases precisely where the others are, plus some additional trouble and expense of the voluntary trip to and from the hospital, but we think most people would say that every patient who wanted to go voluntarily and try if he could not avoid the publicity and permanent damage to him of a legal commitment, ought to have the chance to try. The fourth objection is only a repetition in part of the third. The fifth is only a part of the second. We think that the fact of a patient's knowing he can leave in three days any time he wants to, would be as often an advantage, and he would be more contented for that very fact—such is the perversity and love of independence of average human nature, and if insane people can have a little share in it, for our part we are very willing they should. The sixth objection, that malingerers and vagabonds can be lodged, fed, and clothed at the expense of the State, is an affront to the intelligence of the medical officers of hospitals. If they are not able to tell the difference between tramps and vagabonds and genuine cases of insanity, we advise them to resign.

We commend to Dr. Warner the reports upon the success and advantages of voluntary commitment made by the McLean Hospital, and numerous other institutions public, and private, and can assure him that his view of the subject is not borne out by the better opinion of the profession.—ED. JOURNAL INSANITY.]

ITEMS.

A RARE CASE OF STUPOR, WITH FORCED FEEDING FOR NINE YEARS.—Gadelius had an interesting case under his care—that of a tailor, aged thirty-two years (*Hygeia*, LVI, No. 10, p. 355), an assiduous workman, slow, taciturn, but amenable to reason. Insanity of persecution developed, the prominent symptoms being anxiety and insomnia, with neglect of his person and refusal to take food. When spoken to he invariably answered, in an undertone, “Fine weather to-day,” and, later on, “I do not know.” Forced feeding was carried on uninterruptedly from April 24, 1883, to February 12, 1892, the body-weight increasing during this period from forty-six to seventy-three kilogrammes (101 to 160 pounds). From April, 1883, to May, 1886, he remained in a condition of complete stupor and anesthesia. The author considers the prodromic delirium as a quasi-paranoid psychosis in a degenerate subject, and regards the case as a psychosis of exhaustion, being practically a condition of syncope from beginning to end. On awakening from the stupor, the patient had lost most of his former knowledge of things and places, but soon recovered it.—*Universal Medical Journal*.

DR. L. R. OSWALD of the City of Glasgow Asylum and Hospital, at Gartloch, capacity 1,000 beds, is visiting American hospitals for insane before taking charge of the new institution.

WE regret to record the untimely death of Mrs. A. Stanley Dolan of Highland, Cal., which occurred early in August.

COURAGE OF AN INSANE PATIENT.—During an altercation on the Southern Illinois State Fair grounds a man choked and kicked a woman so severely that she died within an hour. The poor creature would probably have been killed upon the spot had not an insane man from the State Asylum at Anna proven himself braver than the other bystanders and attempted her rescue.

DR. PAYNE, the new asylum physician appointed at Portland, Ore., September, 1895, is reported as saying that he did not deem it necessary to disturb any of the old employes, but that the best interests of the institution would be served by retaining them. We are glad to learn that civil service laws are beginning to be respected in the far West as elsewhere.

KIEL AND ROSTOCK are the only German universities that have no psychiatric clinic.—*Med. Rec.*, August 24th. [We could mention several American universities that have no psychiatric clinic.—ED.]

A CERTAIN advertising dispensary and cure-all has a large corps of correspondence clerks, and its safes preserve the confessions of almost a million miserable and foolish people. This correspondence is tabulated and followed by a record of the treatment, and, what is of more moment, of the contract and the moneys paid on it. Not long ago a like concern failed, and among the most valuable assets were similar records of 200,000 dupes. These the first great business house referred to bought of a speculator, agreeing to pay 50

cents apiece for each new name of a living person. In checking up their lists 60,000 of the 200,000 were found to be already on their books. Perhaps all readers of newspapers have noticed an advertisement for a lock of hair, upon receipt of which the advertiser agrees to tell the sender's fortune and cure his disease. The author of this "fake" lately retired from business and his correspondence, including over 600,000 locks of hair, was sold to an advertising concern. These, says *The Medical News*, are simply samples of business principles applied to medicine.

THE UPPER PENINSULA HOSPITAL FOR THE INSANE, at Newberry, will be open for the reception of patients October 15th. The board of trustees elected Dr. Samuel Bell of Detroit, medical superintendent, and Dr. George L. Chamberlain of Bessemer, assistant. This hospital is on the cottage system and will accommodate one hundred at present. The last Legislature appropriated \$165,000 to be expended in the extension of the present plant.

THE WISCONSIN LEGISLATURE recently enacted that when any citizen of the State becomes an habitual drunkard, and is pecuniarily unable to pay for treatment of such disease, the county court may be petitioned for an order permitting the person to take treatment, at the expense of the county, at some institution established within the State for the cure of drunkenness and drug addictions. But no court shall entertain a petition to send any person for treatment a second time. Individuals may reimburse the county if they desire. The term "habitual drunkard" under this act includes all persons addicted to the use of liquors or drugs to such an extent as to deprive them of the power of reasonable self-control.

UNDER THE LAW in Kansas, which provides that "each insane asylum shall have a superintendent, an assistant superintendent, steward, and matron, who shall be chosen by the board of trustees and shall hold their office for a term of three years," no vacant, unexpired, or fractional terms are recognized. The Supreme Court of that State decided June 8, 1895, that such officers whenever appointed are entitled to hold their respective offices for the period of three years from the date that the appointment of each takes effect.

ASYLUM ABUSES IN GERMANY.—An official committee visited the private asylum of Haus Kannen, near Amelsburen in Westphalia, recently, and made an inquiry into its management. The result is that the provincial administration is considering the advisability of either buying this asylum from the Alexian Brotherhood or building a new one to be placed under medical supervision and lay guardians.

The Medical Standard asserts that abuses in the Cook County Hospital for the Insane have been present since the *exposé* in 1875, and that the only remedy for them is that indicated by the State Board of Charities a decade ago. The county board should make an annual appropriation payable in advance, put it in the hands of trustees not members of the board, but to be selected from among the best citizens of Chicago, who are to serve without compensation. They should have power to make regulations for the government of the institution, to appoint a medical man the single executive

head, to audit his accounts, and to observe and report upon his official conduct as superintendent. This should be the limit of their powers. All executive power should be vested in the superintendent, and the responsibility should rest upon him alone. The chronic trouble with the institution has been want of power in the superintendent. In an hospital every question must be decided from a medical standpoint and the final word, from which there should be no appeal, should be spoken by the physician. Farical as has been the recent investigation into the workings of this hospital it has shown that law is contemptuously disregarded, since restraint is not recorded as required by the act of 1893, and that the contractors have been furnishing bad meat and milk as of yore. Such performances, together with nepotistic removals and appointments, have naturally reduced the insane hospital to the low state lately revealed.

ACCORDING to a recent enactment of the Illinois Legislature members of the Illinois Soldiers' and Sailors' Home, who are now insane, or may hereafter become so, may be committed to any of the State hospitals except that for the criminal insane, and such persons must be credited to the State at large, as they are wards of the same.

THE Illinois Legislature of 1895 appropriated the sum of \$171,970 for repairing the damage done by fire, removing *débris*, and rebuilding in a fire-proof manner the south dormitories and wings and the administration building of the Southern Hospital for the Insane at Anna.

GOVERNOR ALTGELD has appointed as trustees of the Western Insane Hospital, created by the last General Assembly, W. Seldon Gale of Galesburg, John N. Eden of Sullivan, and Thomas Silvas of Rock Island. The location of the new asylum has not yet been determined.

ROCK ISLAND and Moline are figuring together to secure the new Western Illinois Hospital for the Insane.

THE new Protestant Hospital of East St. Louis was formally opened August 10th.

THE State Hospital for the Insane for the southeastern district at Norristown, Penn., has purchased adjoining property of about eighty-five acres for a sewage farm, in order to protect the Schuylkill River from pollution by that source.

ACCORDING to *The Medical Press*, Dr. J. A. Campbell is somewhat self-complacent, optimistic, and illogical when he says: "If the average recovery rate in English county and borough asylums had been for twenty-two years anything approaching to what it has been here (Cumberland and Westmoreland), we should not hear so much about the increase of insanity as we do." A large death-rate is a prime factor in reducing the population of an asylum, and in Scotland many unrecovered patients who can be treated in private dwellings are discharged. At Carlisle for thirty-three years the figures are: Recovered 1,794, unrecovered 648, died 1,210; and for last year, recovered 83, unrecovered 31, died 58.

IN Chester County Asylum, England, the average cost per week per head for 621 patients is 6s 9d, and for provisions 1s 11d. *The Medical Press* says it is questionable whether the functions of a hospital can be fulfilled with no larger expenditure for each person than the above figures would indicate, and it is glad to know that there is a very decided reaction antagonistic to a form of competition which was not creditable to our profession.

OVERCROWDING IN THE LANCASHIRE ASYLUMS.—In the four great asylums in Lancashire there is scarcely a vacant bed, and many patients are obliged to board outside the buildings. At Whittingham the additions planned in 1892 have not been commenced, which delay may be due to the fact that another asylum is in course of construction at Winwick. Here, as everywhere else, the evil day of providing fresh accommodation is postponed as long as possible, with the inevitable result that provision for the insane is in arrears, notwithstanding the depressing fact that there is an incessant and increasing demand for such accommodation.

THE necessary expansion of the Cork Lunatic Asylum for the accommodation of harmless workhouse lunatics is likely to result in the usual mammoth builder's "job," according to *The Medical Press*. The board of control favors the establishment of a separate asylum, while the board of governors prefers an addition to the present building under its own management.

DR. F. W. MOTT, assistant physician to Charing Cross Hospital, has been appointed pathologist to the London County Asylums. He is to study the pathology of insanity in all its bearings and give his entire time to the duties of his office.

THE "HYPO" CLUB.—The Chicago papers record the death of one Joseph Nesbit, a gambler, at one time very successful, but reduced to poverty, and found dead in a lodging-house. He had been a victim of morphine, and had also resorted latterly to cocaine. *The Tribune* speaks as follows of him and his unique position in the "hypodermic" organization:

"'Hypo Joe' was called so by his colleagues because of his habit of using excessive hypodermic injections of morphine. Among the small band of men whose habitual use of opiates and poisons has made them outcasts of society he was known as the president of the 'Hypo' Club."

A NAVAL SURGEON AND A CRAZY CAPTAIN.—English journals report the case of an English naval surgeon who has recently been court-martialed because of a dispute arising between him and the captain. The dispute arose about the position of an operating-table, and the captain became so excited that the surgeon considered him to be mentally affected and unfit to command the vessel. He therefore ordered him on the sick-list. The captain refused to go, and placed the surgeon under arrest. The court refused to allow any evidence on behalf of the surgeon on the question of the captain's health, and after a short consultation found the surgeon guilty, and ordered that he be dismissed from the service. Great indignation is felt at the verdict and mode of conducting the inquiry, and an effort will be made to challenge the decision. The case suggests one of a similar kind that recently occurred in this city.—*Medical Record*, June 29th.

A NEW SIGN IN LOCOMOTOR ATAXIA.—Biernacki reports a new sign in locomotor ataxia (*Univ. Med. Jour.*). He has observed that in many cases of tabes no pain is experienced when violent compression of the ulnar nerve is made, though the usual tingling of the fingers is felt. This condition is present in 75 per cent of his cases, and occurs in no other form of organic disease that might be mistaken for tabes.

PARESIS coming on from syphilis and associated with excessive use of spirits is not uncommon, and is often masked and not recognized. Cases of inebriety are often paretic, with a syphilitic origin, and require very active medication, and even then are incurable. Traumatism is often associated, and requires careful diagnosis to eliminate.—*Quarterly Journal of Inebriety*.

SOME curious facts have been brought to light in the case of a young lady of Springfield, Ill., who was treated for insanity by one Dr. Keith at Belleville, Ohio. Dr. Keith gave cold packs and vegetable emetics and a diet of fruits, vegetables, nuts, and fish, but no milk, eggs, or bread. The patient was alleged to be cured and the doctor accompanied her to her home, and then presented a bill of \$5,000, securing \$800 in cash and the rest in notes from the widowed mother of the patient, which latter, however, she has refused to pay, and in the litigation growing out of the matter it is expected an indictment for obtaining money under false pretenses will be returned in Springfield against Dr. Keith. We understand the young lady is now in a State institution in Illinois.

CHRONIC RENAL DISEASE AND GENERAL PARALYSIS. By Bristowe (*Journal of Mental Science*, July, 1895).—It is maintained that chronic renal disease is very frequent in ordinary insanity, but is far more common, in fact the general rule, in general paralysis. The form of renal disease is not always interstitial nephritis. These two diseases are regarded as of toxic origin, and as manifestations of arterio-capillary fibrosis.

IMMUNITY TO TETANUS INDUCED BY ESTABLISHING STRYCHNIA TOLERANCE.—Rummo, the Italian investigator, has recently shown (*Mod. Med.*) that strychnia, which produces physiological effects very similar to those of tetanus, may be used as a means of establishing immunity in guinea pigs against infection of tetanus. After establishing a moderate degree of tolerance to strychnia, guinea pigs were injected with tetanus culture, which was found to be ineffective in most cases, only slightly operative in others, while the controls all died.

RELATIONS BETWEEN DELIRIUM AND INTELLIGENCE.—Eirondon maintains that the deliriant power of the insane is in direct relation to their intellectual capacity. In order to have delirium with great and numerous ideas they must have a sufficiently well-organized substratum of intellect. The lesser varieties of intellects have delusions and delirious manifestations of an elementary and uncomplicated character, formed from a few ideas and always expressed in the same monotonous fashion. On the contrary, the power of the superior psychical activity in certain intelligent insane enables them to bring calumnious accusations attested by a multitude of circumstantial details, the apparent correctness of which may lead to an error of justice.

The diminution of psychical activity causes a closer union between the idea and the act, and a tendency to react from delirious conceptions by violent impulsive acts. In all cases it will be possible and useful for the alienist to seek for the intellectual substratum of the delirious person in order to better appreciate the dangers and the possibility of cure.—*Med. Record*, June 29th.

At the recent meeting of the International Penitentiary Congress a question up for discussion was that of proper methods by which to protect society against irresponsible criminals, those who are recognized as having been mentally irresponsible at the moment when the crime was committed. The discussion concluded with the adoption of the following resolutions. "(1) Special asylums should be established, or special departments of asylums set apart, for the incarceration of individuals who have been acquitted, or whose sentence has been suspended, on account of mental aberration; (2) The principle should be recognized that liberation of insane persons, incarcerated in these special asylums or departments, can only be obtained by joint approval of the judicial, administrative, and medical authorities."—*North Am. Pract.*

INEBRIETY AND INSANITY.—The large part played by alcohol as a cause contributing to insanity receives fresh confirmation in the fortieth report of the British Commissioners in Lunacy. For the five years ending 1893 alcoholism was the predisposing or exciting cause in 20.8 per cent of male and 8.1 per cent of female lunacy. Intemperance is credited with 25.6 per cent of male and 19.9 per cent of female general paralytics.

AMERICAN JOURNAL OF INSANITY.

JANUARY, 1896.

SIMPLE ANGIOMA OF THE CEREBELLUM.

BY LUDVIG HEKTOEN, M. D.,
Pathologist Rush Medical College Laboratory, Chicago.

Among the early contributions concerning brain angioma may be mentioned those of Schroeder van der Kolk* and of Virchow.* The first author attributes much importance to enlarged vessels or groups of vessels in the brain in the causation of epilepsy, while Virchow regarded the ectasiæ as harmless, probably congenital, and not unlike external nævi, because the size in some instances were so great that if the ectasiæ were of sudden origin there would have ensued more violent symptoms. These "nævi vasculosi of the brain" are spoken of as found oftenest in the floor of the fourth ventricle, where small veins and capillaries may enlarge to form single, or rosettes of, venous sacs that could be confounded with capillary apoplectic foci. The condition of the vessels consequently corresponded to that in the larger, blue-red, telangiectasia in the skin of the face.

Virchow and Kölliker† found a red, speckled area in the pons consisting of globular and spindle-shaped dilations of the capillaries and small veins which were thrown into spirals and presented numerous anastomoses, but there were no changes in the surrounding pontine tissue, the presence of the angioma appearing dangerous simply on account of the physiologic dignity of the organ in which it was found.

The following brief extract of the description of H. Morris' case of venous vascular tumor of the cerebrum‡ will show the apparent origin of the angioma in the pial vessels from which Klebs§ claims that all the cerebral blood tumors arise:

*Archiv. für path. Anat. u. kl. Med., Bd. III, 440, Bd. VI, 550.

†Loc. cit., Bd. III, 440.

‡H. Morris, Transactions Lond. Path. Society, Vol. XXII, 1872, p. 23.

§Klebs, Allgemeine Morphologie, 1889, p. 655.

Man, aet. 38; irritable, excitable, intemperate; his family history showed drunkenness in the mother and in the mother's father. At the age of thirteen he was knocked down by a fire engine and soon afterward he had his first fit, which recurred during the last thirteen years of his life. At one time he was insane for some months. He died after having had a series of seizures, during which delirium, bronchitis, and pneumonia developed. After death there were found old tubercular areas in the apex of the right lung with pneumonia in left lower lobe. The arachnoid membrane was opaque and thickened, the pial vessels being congested and varicose. The left cerebral hemisphere, a little to the side of its posterior angle, was seen to be adherent to the parietal arachnoid, and a congeries of tortuous veins distended with dark blood bulged outward from the surface of the brain. These veins took very twisting courses, were closely matted with each other, and here and there some fine areolar tissue intervened between their walls, which were exceedingly thin, and in places dilated into sacculi as large as a small cherry. The whole formed a tumor in which was no brain substance, and which reached nearly to the lower surface of the cerebrum, and upward nearly to the convex surface. Projecting forward from this mass of veins into the brain substance between the posterior and descending cornua of the left lateral ventricle was a large ovoid cyst, formed by the distension of the side of one of the veins of the tumor. This was as large as half a walnut on section, and was filled with blood clot of varying ages—some quite recent, others of an ochre-yellow color, and deposited in strata like the clots in an aneurism. A curved probe could be passed from the posterior part of this cyst along an infundibuliform process into a vein. The tumor did not reach to the lateral ventricle and did not communicate with the choroid plexus. The brain matter surrounding its front and lateral portions had a yellow, softened appearance, but no evidence of actual softening having taken place was discovered microscopically.

Morris concludes that from our knowledge of these formations in other parts of the body it appears very probable that this telangiectasia existed at or soon after birth, and that it was increased by the causes which produced congestion of the other vessels of the brain and the pia mater.

Joseph* describes an example of a cavernous angioma of the fourth

*Zeitschrift für kl. Medicin, Bd. XVI, 1889.

ventricle which caused marked compression of the medulla and hydrocephalus. The patient was a man, 22 years old, who suffered from intermitting headache, vomiting, syncope, spells of unconsciousness followed by improvement, which soon gave way to exacerbation of the previous symptoms and the development of many additional ones. The duration of the disease was one year. The tumor was 45 mm. long, 1 cm. thick, and 20-30 cm. broad; it was firm, composed of wide caverns containing blood and separated from each other by walls of connective tissue.

D'Arcy Power* describes and figures an oval angioma of the internal surface of the pia covering the angular gyrus; after preservation in spirit the tumor measured an inch in length and three-quarters of an inch in diameter; the tumor consisted of a close plexus of vessels of an average diameter of an eighth of an inch.

These few and brief references to the cases recorded in the literature will suffice to demonstrate that capillary, cavernous, and simple venous angioma may occur, though only occasionally, in almost any part of the brain, and furthermore that the symptoms caused by the disturbance due to the tumor will, as one would expect, depend upon the location and, to a certain degree, the extent and variety of new growth present.

There does not seem to be any example of a typical arterial angioma in the brain described or referred to in the literature ordinarily at disposal, but Virchow† states that both venous and arterial ectasia in the spinal cord have been described by J. V. Lenhossek,‡ and it is not at all impossible that in some of the cerebral angiomas recorded there may have been new vessels with arterial walls.

As already referred to, Klebs§ regards the pure cerebral angioma as springing from the vessels in the pia, and he maintains that even those which occur in the interior of the brain substance have a connection somewhere with the membranes. Klebs observed a case in which a large, wedge-shaped angioma spread downward from the surface; it was made up of cavernous spaces with thin walls, and the endothelial cells had proliferated to form club-shaped masses, without any intercellular substance, and consequently easily detached. Curiously enough Klebs found, in the hemorrhagic

*Transactions London Path. Society, Vol. 39, 1889, p. 4.

†Loc. cit.

‡Beiträge zur path. Anat. des Rückenmark, aus der Oest. Zeitschrift für prakt. Heilkunde, 1859, p. 60.

§Loc. cit.

infarcts in the lungs which were present, that the emboli were the same club-shaped aggregations of endothelial cells as were seen in the brain angioma; in other words, the masses of proliferated endothelial cells had become detached and caused pulmonary embolic infarcts, and in this demonstration of Klebs lies a possible explanation of the actual cause of the angiomatous metastasis referred to by Langhans.*

Angioma in the brain consequently occurs so seldom that the following instance thereof in the cerebellum merits description:

CASE.—The patient was a woman, 40 years old, admitted to the Cook County Hospital July 14, 1892, with a compound comminuted fracture of the right side of the skull, due to a blow with a hammer in the hands of her husband. There were extensive scalp wounds and great depression and comminution of the skull in the right parietal region, the hemorrhage being profuse. The fragments were elevated and removed, the hemorrhage arrested, and drainage instituted. The dura was lacerated and the brain contused underneath the fracture. Three days later there was noted a left hemiplegia, much headache, and irrigation of the wound brought away disorganized brain tissue and blood clots. Two days after this the patient became unconscious and remained in coma until death, the 25th of July, eleven days after the injury.

Nothing particular or specific could be learned in regard to her health before the assault by the husband, except that it was supposed to be good. The autopsy was made twenty-four hours after death.

Only such findings as may seem to have any bearing upon the condition in the cerebellum will be detailed. It may be mentioned, however, that there was found pulmonary edema; calcareous and slaty indurated areas in the apex of the right lung; calcareous and anthracotic bronchial glands; arterio-sclerosis in the commencement of the aorta, in the coronary and in the splenic arteries; small cystic ovaries.

There was a large, irregular wound in the right temporo-parietal region, filled with gauze; there was much extravasation of blood between the scalp and the calvaria; the opening in the skull was 3.5 cm. in diameter, its lower margin was 4 cm. above and 3 cm. in front of the external auditory meatus; this opening was filled with disintegrating brain substance, and on removing the gauze, which was crowded into the hernia, thick, purulent material exuded. Removal of the calvaria showed considerable hemorrhagic infiltra-

*Virchow's Archiv., 1879, Bd. 75, p. 273.

tion into the meshes of the pia over both the hemispheres, the dura and the pia being adherent about the hernia cerebri. There was considerable slightly turbid cerebro-spinal fluid. There was an extensive area of softening and disintegration in the brain below the fracture extending over the larger part of the motor convolutions reaching nearly to the superior longitudinal fissure. The under surfaces of the frontal lobes contained areas of contusion; in the roof of the right orbit there was an area of splintering in the bone and in the frontal lobe above this was a mass of softly clotted blood weighing 31 grams. Otherwise the brain mantle presented a macroscopically normal appearance, the ventricles containing a quantity of clear, limpid fluid. The pons and the medulla were also quite healthy, but in the right cerebellar structures the following conditions were found: As the fourth ventricle was opened in the usual (Virchow's) method by means of a media incision through the vermes and the valve of Vieussens it was found that the lining over the right lateral half of its cavity presented four small, deep-red nodules which vary in diameter from two to four millimeters approximately; these masses occur upon the right lateral portion of the ventricular lining, two being side by side, the other two separate by themselves; they are all partly buried in the wall of the ventricle and consequently sessile; the surface is smooth, shining, and of a deep-red color. Otherwise the ependyma of the fourth ventricle was quite normal in its appearance (Fig. 1).

The cut surface of the vermes presents a few similar dark-red nodules, one or two of which are cut across, showing that they contain blood, which runs out upon the cerebellar surface; the cysts are situated in or upon the laminæ of the vermes, quite often at the junction of the gray with the white matter, sometimes at the bottom of a sulcus, sometimes at the summit of a lamina.

The external surface of the right cerebellar hemisphere also shows a few such elevations here and there, located in the gray matter, projecting externally underneath the pia, which is not thickened or changed in any way and not any more intimately adherent to the red, nodular masses than to the cerebellum in general (Fig. 1).

On exposing the interior of the cerebellar hemispheres by means of a number of vertical incisions it is found that cystic masses are present in the substance of the right half. The blood containing cysts are variously located with reference to the gray and the white matter, and they are found in the corpus dentatum as well as in the laminæ. In the central white matter of the hemisphere are a few

quite large cavities, irregular in outline, and subdivided into thin-walled compartments of varying sizes. It is not difficult to recognize larger blood vessels in this part of the cerebellum than one is accustomed to meet with. With the hand-lens numerous small cavities are detected that were not visible to the naked eye.

There are no hemorrhagic extravasations, no foci of softening, and no cysts containing other fluid than blood found in the cerebellum. The tissues were hardened in Mueller's fluid; a number of staining solutions were employed.

In describing the microscopic appearances the surface nodules will be considered first and then the structures located in the deeper portions of the right half of the cerebellum.

It was noticed during the preparation that the originally smooth surface of the peripherally located masses soon became rough and finely granular. In the sections the nodules are found to be built up of a number of closely aggregated, blood-containing spaces. In shape these spaces are, as a rule, irregularly oval, sometimes triangular, occasionally quadrilateral. The largest of the spaces are readily visible to the naked eye, while the smallest are not any larger than an ordinary capillary on cross section, so that the difference in the size of the largest and the smallest is very marked.

The wall of the cavities consists of connective tissue, arranged in quite dense, circular bundles, in which are small spindle-shaped nuclei; occasionally the bundles split up into a number of wavy, loose aggregations of fibrous tissue, between which pass interlacing strands; in some places the adjacent spaces are separated by what might be called a single wall thickness; in other places there may be meshes of loosely arranged connective tissue between the walls of neighboring cavities. The thickness of the connective tissue walls varies much in various parts of the same nodular mass as well as in the same wall of the single space; there does not seem to be any special relation between the size of the angiomatous space and the wall thickness, but it appears that the more superficial the space the thicker the wall; spaces in immediate contact with cerebellar tissue have, as a rule, the thinnest walls. As already stated, the pia is not adherent to and not thickened over the superficial angiomata. A quantity of extremely loosely meshed connective tissue without any typical arrangement whatsoever intervenes between the pia and the angiomata. There are no unusually large blood vessels to be traced from the pia, either to the blood angiomata or to the cerebellar tissue in general. As regards the lining of the compartments



FIG. 1. Simple angioma of the cerebellum, showing the angiomatous masses in the interior of the fourth ventricle and upon the surface of the right cerebellar hemisphere.

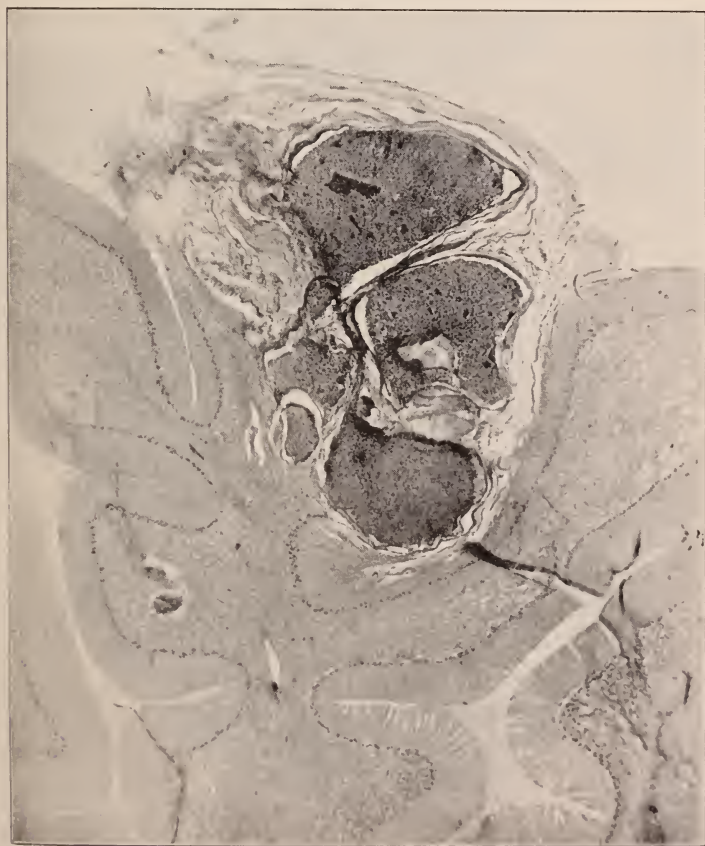


FIG. 2. Angioma mass, replacing almost a whole tertiary lamina, and causing pressure atrophy of the gray matter of the adjacent lamina to the right. In the interior of one of the spaces is a free, club shaped homogeneous mass. The spaces are filled with blood. Photo-micrograph, X 85.

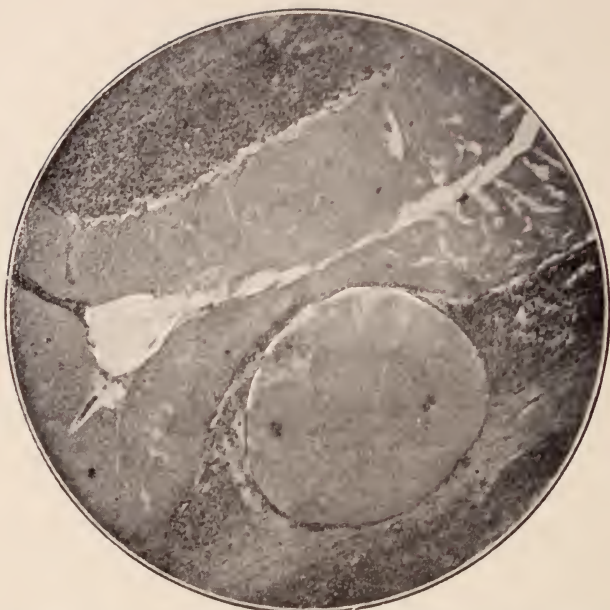


FIG. 3. Round, angiomatous space, completely interrupting nuclear layer of the lamina upon which it develops, and partly the gray and the central white matter as well; thin stratum of the nuclear layer extends around the space on the side corresponding to the nearest sulcus. Photo-micrograph, X 85.

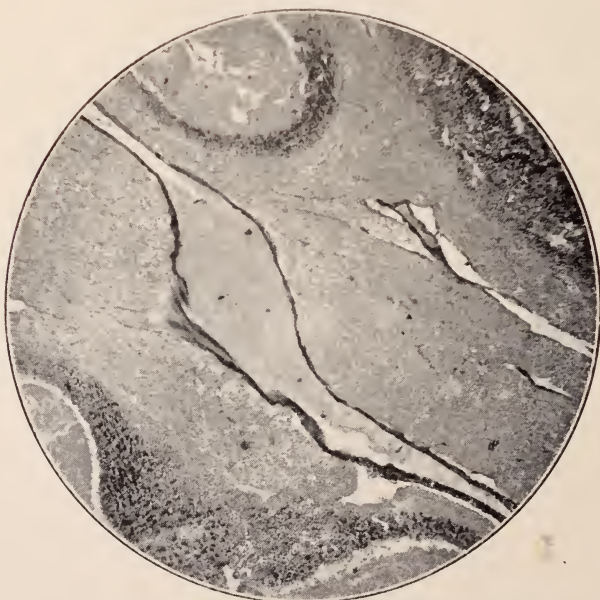


FIG. 4. Large venous channel running in the central white matter of the lamina, cut longitudinally, with pesiform dilatation. Photo-micrograph, X 85.

it may be said that any endothelial cell structure can not be made out, the inner aspect of the fibrous wall being perfectly smooth (Fig. 2).

The appearances in the interior of the cerebellum may be briefly described as follows: There are found a large number of single, thin-walled, blood-containing spaces of the most varying size and shape; some are very minute, irregularly circular or oval in outline; others appear like vessels cut longitudinally, and in some instances these extensive compartments can be followed through several fields in the microscope with extremely low powers, being usually found to run in the central white matter of the laminae and frequently presenting saccular as well as fusiform dilatations (Fig. 4). These single angiomatous areas are met with very freely in nearly all the sections, and they occur quite indiscriminately without any reference to any particular locality or tract.

Then there are also found large and small clusters of spaces without much cerebellar tissue between the single chambers, which often are in such close apposition as to be separated by but one wall, or there may be a quantity of loosely-meshed connective tissue arranged around each space; there are also very occasional instances of clusters of angiomatous caverns between which there stretches a small quantity of more or less sclerotic tissue. The size and the shape of the individual chambers in these aggregations, which are principally located in the interior of the cerebellum, vary very much. In one district adjacent to such a nodule the cerebellar tissue was perforated, as it were, a number of times, the small openings containing here and there a few red corpuscles, but the majority being empty; in most instances a delicate lining could be demonstrated.

The structure of the walls surrounding the spaces in the interior of the cerebellum in no way differs from that of the peripheral nodules; they are made up of a quite densely packed connective tissue, their thickness being variable; there was no endothelial lining demonstrable. A few nuclei are scattered through the wall structures as well as in the loosely arranged, extra vascular connective tissue, but there was not found any areas of small cell infiltration. In the irregularly arranged network of fibrous tissue about the superficial nodules, as well as projecting into the interior of the centrally located spaces from the wall, are occasionally more or less homogeneous, usually oval or oblong masses or areas of supposed hyaline degeneration; in some places the pedicle which attaches the

mass to the internal aspect of the wall is very thin, and in Fig. 2 is shown such a mass lying free in the interior of a large angiomatous space and not unlike the corpora amylacea in the prostate gland as well as elsewhere. The hyaline nature of these homogeneous masses was sufficiently well demonstrated by means of the Van Gieson staining method with hæmatoxylin and the acid-fuchsin-picric-acid mixture in which they assume the intense red color which has been found to be characteristic of hyalin by Ernst,* v. Kahlden,* and others. Presumably the masses, free as well as polypoid, originate from hyaline changes in the connective tissue composing the walls of the angiomatous spaces; or they may represent the changed endothelial lining. As already indicated all the spaces are filled with ordinary blood; in the specimens stained with eosin the red corpuscles are colored very nicely and the spaces are found very closely and fully packed, as a general rule.

One of the most interesting features in connection with the peripherally as well as centrally located angiomatous masses is their relation to the surrounding cerebellar tissue. The nodules are invariably imbedded in the substance to a very considerable degree, so that they replace almost completely that part of the surface in which they occur, as is readily observed from the annexed photo-micrographs. Thus, Fig. 2 shows an angiomatous mass which has replaced almost entirely the gray as well as the white matter of the tertiary lamina upon which it has developed; in fact, only a small portion of the gray and white matters remain to the left of the lamina referred to, and the gray matter of the adjacent lamina to the right has undergone considerable atrophy and thinning toward the bottom of the sulcus, as compared with the gray layer covering the other laminae visible in the section. This thinning is easiest explained as due to a pressure atrophy on account of the encroachment of the angiomatous mass.

And in Fig. 3 is shown a single, nearly perfectly round space, surrounded by a connected tissue wall and crowded with blood cells, which completely interrupts the nuclear layer of the lamina in question, and encroaches seriously upon the gray matter as well as upon the central white matter, portions of both of which it entirely replaces. In this particular section it is interesting to observe that a very thin stratum of the nuclear layer extends around the space on the side corresponding to the nearest sulcus.

Close study of the cerebellar tissue, immediately adjacent to the

*Centralbl. für path. Anat. und allg. Path., B. IV, No. 12.

angiomatous masses now under consideration, shows, in a general way, absolutely no special changes in the component parts; that is to say, the size and the shape of the cells differ in no perceptible particular from that of the cells in other parts of the cerebellum. There is no specially marked condensation or degeneration of the tissue in immediate apposition to the angiomatous spaces. There is absolutely no cerebellar sclerosis in any part of the sections treated according to the Van Giesen and other differentiating methods of staining. The angiomatous districts simply replace the cerebellar tissue proper without appearing to cause any special, degenerative, or other changes in the adjacent structures. To this last general statement there is perhaps this exception: When an angioma is located at the junction of the cortical gray matter with the nuclear layer, the multipolar ganglion cells of Purkinje are absent, or at least incapable of demonstration, for some little distance on each side, whereas the tissue otherwise appears quite unchanged; then again, when an area of blood-vascular spaces is located, either in the cortical gray matter or in the nuclear layer, but without encroaching upon the ganglion cells, these will be absent for a little distance, even though there is cerebellar tissue interposed between the usual location of the ganglion cells and the wall of the angioma. The multipolar ganglion cells are consequently absent for some little distance away from the angiomata, which otherwise simply replace the tissue of the cerebellum without causing other changes. There are no microscopic foci of softening or hemorrhage.

COMMENTS: From the gross and microscopic appearances in the cerebellum here described it is evident that it concerns a so-called simple or telangiectatic angiomatous condition in the right cerebellar hemisphere, which contains abnormally numerous and abnormally large and irregularly formed veins and capillaries.

The venous rosettes in the floor of the fourth ventricle (Fig. 1) and the spindle-shaped, oval, and saccular dilatations upon the abnormally large intra-cerebellar vascular channels reproduce, to a great extent, the structure of all simple angiomata, no matter where they occur, whether in the skin, in the subcutaneous tissue, in the mammary gland, in the bones, or in such important organs as the brain or the spinal cord. It is peculiar, however, that the telangiectasis in this specimen involves apparently all the vessels in the part of the cerebellum affected, except the arteries, so that instead of a mere local angiomatous mass there is present rather a general vascular overgrowth throughout the entire right

half of the cerebellum; and it is especially interesting to note that in the main the angiomatous sacs and channels simply replace the tissue of the cerebellum without any marked or constant secondary changes in the adjacent structure. This arrangement points strongly to the congenital or very early development of the angioma, because the relation between the vascular formations and the cerebellum is one of mutual tolerance without any protest in the shape of sclerotic and other secondary changes, and such a condition could not easily be imagined to exist, in case the process had been initiated suddenly or at a comparatively brief time before death. It is therefore possible to state positively that the fatal injury to the skull and to the brain had nothing to do with the development of the angioma.

The clearly demonstrable thinning of the gray matter in the laminæ immediately adjacent to superficial masses of blood spaces (Fig. 2) is manifestly the result of a gradual pressure-atrophy.

The absence of the cells of Purkinje for some little distance immediately about angiomatous sacs, found in or near the normal location of these cells, is more difficult to explain; it may be congenital; it may be traceable to the disturbing influence of irregular circulation in the venous spaces.

From the effects of this abnormal vascular arrangement in the cerebellum important inferences may be drawn as to the probable results in case certain districts in the brain, for instance, should become the seat of a similar process.

FRAGILITAS OSSIUM, ILLUSTRATED BY A CASE.*

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The term fragilitas ossium is applied to that condition of the bony system characterized by a lack of proper nutrition, which may render the bones abnormally brittle (properly called fragilitas), or spongy, soft, and flexible. The object of this paper, however, is not to discuss osseous trophoneurosis in its broadest sense, but particularly the fragility often found in the insane. It is an accepted fact that the bones of persons suffering from certain forms of nervous disorder are abnormally brittle. The pathology is probably as obscure as that of fragilitas in the sane. It is doubtless only an expression of altered nutritive processes. Many different views are entertained by different pathologists. Dr. Blanchard defines it as "a chronic state of osseous inanition."

Gross, in his system of surgery, says "it is the result of disease; in some being soft, in others brittle." The areolar tissue is injected and infiltrated with bloody matter, and the periosteum is thickened, spongy, and congested. Another author maintains that the condition is one of saturation of the osseous tissue with a certain oily matter. The pathological condition is probably similar in some instances to osteomalacia, viz., an increased vascularity of medullary tissue. The vessels become excessively engorged, and in consequence give way, causing extravasation of blood clots, which may be found disseminated through the medulla, intermixed with fat globules, and at times new cell elements, the exact import of which is not at present known or understood. That the true infiltration, such as commonly characterizes inflammation, be present, however, can not be asserted. We are taught that this engorgement is at first central in the medullary tissue, and filling its cells with a gelatinous material, moves centrifugally, extending to the outer portions of the cancelli, the cells of which are gradually dilated, and finally pass into the Haversian vessels of the compact structure.

Agnew tells us that "coincident with this vascular disturbance comes the work of decalcification, which, like the first, extends from within outwards, the products passing off partly by the kidneys, in

* Read at Denver.

the form of oxalate of lime, and forming, in some instances, renal vesical calculi."

By this process we see that the constituents which impart solidity to the structure, viz., the saline, are slowly but surely removed, and in consequence the bone becomes soft and flexible, because there is nothing left except the cartilage, and even this may in turn disintegrate and liquify. While the actual pathological condition may not be positively demonstrated, yet we are very certain that there is a condition of the bones that predisposes to fracture, and that this tendency is greatly exaggerated in the insane.

You have heard it stated, and by medical men, that insanity did not interfere with longevity. This position is so palpably false that it scarcely merits consideration. While occasionally an insane person reaches an advanced age, yet the average reduction in expectancy of life is from fifteen to twenty years.

By carefully prepared statistics, it has been proven that the average life of an insane person was about eight years. Now the average age of insane persons when admitted to our hospitals is about thirty-eight years.

According to the mortality tables of the insurance companies the expectation of life for the sane man at thirty-eight years is twenty-eight years, or a reduction for the insane man of twenty years.

In nearly all forms of mental diseases tending to chronicity, the temperature is below normal, showing the patient is not thoroughly nourished. Now it is but natural to suppose that the osseous structure suffers equally in this innutrition, and if so the tendency would undoubtedly be to fragility. Frequently has the attention of medical men been directed to the very important morbid changes of the osseous system which occur in the insane.

In some cases the bones are soft, yield readily to pressure and produce various deformities. In others the bones are fragile, so fragile indeed that they can be readily broken with the thumb and finger after death. Such cases are of course very liable to fracture during life.

Davey, in 1842, reported six spontaneous fractures of the long bones.

Dickson, Williams, and others have reported cases in which the ribs were found so brittle at the autopsy that fracture could be readily produced. At different times we have had reports from reliable medical men of the pathological brittleness, softness, or

boggyness of bones as presented at the autopsy. It has also been incontestibly proved that persons afflicted with general paralysis, or with other forms of intense cerebral diseases, may sustain severe and extensive osseous or other lesions without manifesting the slightest perception of pain or impairment of muscular activity.

Dr. Gray, while superintendent of Utica State Hospital, reported among the admissions for a single year, one case fractured clavicle, one of fractured ribs and sternum, and one of fracture of the arm, all acute mania. He adds that in all of them were these injuries produced without intentional violence, or, in other words, they were not attributable to mal-usage by attendants, but accident, or self-inflicted injury. In no case did the patient complain of pain or injury, the fact of the bone fracture existing at all being unsuspected by patients or friends till the medical examination was made by asylum physicians. Some of them were wild and boisterous and inclined to fight, moving their arms and body in every direction, and complaining of no pain.

James Howden reports an interesting case of mania, followed by hyperesthesia and osteomalacia. In this patient, who died at the age of forty-eight, it was found upon post-mortem that nearly all the bones of the skeleton were soft and brittle, the bones of the spine and pelvis cutting as easily as cheese.

After examining a great many cases investigators have concluded that "in chronic diseases of the central nervous system, especially in insanity, the ribs are apt to undergo very considerable morbid changes, which give rise to increased brittleness, and hence predispose the bones to fracture from slightest violence." The pathological condition may be a rarefying osteitis, a condensing osteitis (sclerosis), or it may be an osteomalacia.

Our pathology teaches us that the rarefying osteitis may result in suppuration, necrosis, or caries. It is characterized by the formation in the marrow spaces, or beneath the periosteum of new, very cellular and vascular tissues, under whose influence the substance of the bones is absorbed. Condensing osteitis consists in the new formation of bone in the walls of the marrow cavities. This may be primary, or secondary to rarefying osteitis. Osteomalacia consists in the softening of fully formed hard bone tissue by the removal of its organic salts. Its cause is not known. Microscopical examination shows that the decalcification occurs first in the periphery of the Haversian canals, and in the inner layer of the walls of the marrow spaces.

That there are peculiar changes in the osseous system consequent upon diseases of the brain and spinal cord is beyond question; that the pathological condition is obscure is equally certain. There may be trophic changes, due to a disturbance of the sympathetic system, or it may be more closely connected through the posterior column of the spinal cord.

A. B. (æt. forty years), admitted to Athens State Hospital, violent and raving. Sheriff stated that several times on the way to the hospital he had fought viciously, and, while they had overpowered him, yet no undue force had been used. Patient was very much excited, swinging his arms, *a la* Sullivan, and apparently had full and free use of all his physical powers. He complained of no pain, and the existence of fracture was unsuspected until the assistant physician made his usual examination of new cases. It was then ascertained that four ribs were fractured, and at different distances from manubrium sterni. This was on Friday. On Sunday morning following patient died, having had no attack of violence after admission to hospital. Autopsy revealed the fact that not only were the ribs fractured, but they were brittle as pipe-stems, and that one fractured end had lacerated the pleura and lung tissue to a very considerable degree. This patient at no time complained of pain, nor did there seem to be any interference with muscular action.

L. V., admitted to Toledo State Hospital July 12, 1890, suffering from delusional melancholia. No special features were manifest at the time of admission. He was placed in one of the cottages, and assigned to a bed in the dormitory where about twenty patients slept. Some time during the night of July 13th, becoming restless, he arose and for a time walked aimlessly about the room; finally stopping, he leaned over the bed of another patient, who being thus suddenly aroused from sleep, failed to note that the man was harmlessly gazing at him, and throwing off his covering, he placed his foot against the chest of Mr. V., and with considerable violence pushed him away from the bed, not so violently, however, as to throw him down. Mr. V. went back to his bed, and lay quietly down until morning, when he arose with the other patients, dressed himself, and walked without assistance or apparent effort to the congregate dining hall, probably an eighth of a mile distant. About the middle of the day he became very restless and noisy, and attacked the attendant, who being alone on the hall, had to use some force in subduing him. It was denied, however, that any

undue force had been applied. He neither kicked nor struck him, nor placed his knees upon his chest when on the floor. The supervisor was ordered to remove the patient to the building in which disturbed patients were treated, and immediately did so, Mr. V. resisting some, though not fighting. When upon the veranda leading to the disturbed ward he broke away and ran considerable distance before being overtaken. In his running he showed no evidence of soreness or illness. When overtaken he gave up and returned with but little struggling. Very soon after being placed in the ward, however, he complained of being sick, and a physician was notified and patient put to bed. Upon examination we discovered several fractures of the ribs, and ordered his immediate removal to the hospital. He sank rapidly, though complained of no pain. He died on the evening of July 17, 1890. Autopsy revealed a remarkable state of affairs.

Autopsy held upon the remains of L. V. July 18, 1890, 10.30 A. M., by hospital staff and coroner. Thirteen hours after death, rigor-mortis well marked. Inspection of body. Slight abrasions on left side of face, on neck, on each hip, right knee and left ankle. Slight bruise on left elbow, breast and sides discolored.

Upon opening chest, muscular tissue beneath skin was found to be congested. Upon right side the 3d, 4th, 5th, 6th, 7th, and 8th ribs were fractured, the 7th being broken in two places; first fracture about two inches from sternum, and second, one inch from first. Upon left side the 3d, 4th, 5th, 6th, 7th, and 10th ribs were found to be fractured. The 3d, 4th, 5th, and 7th ribs were fractured in two places, the second fracture in each instance being almost beneath the axilla.

The 6th rib was fractured in three places — first, about one inch from sternum; second, about four inches from sternum; and 3d, beneath axilla. The 10th rib was fractured at junction of hypochondrial cartilage. Sternum broken below juncture of 4th and 5th ribs, an exostosis projecting three-fourths of an inch under first rib, right side, two inches from sternum.

A clot in right lung in plural cavity. Heart, a chicken-fat clot in right ventricle, otherwise normal. Lungs, lower lobe of right lung wounded at edge beneath 5th rib. Left lung adherent to diaphragm at lower and posterior portions, showing former pleurisy. Pleural cavity filled with blood.

Calcareous deposits in bronchia. Hypostatic congestion. Stomach congested. Liver slightly enlarged. Kidneys, fatty deposits

and probably pus in pelvis of right kidney; fatty deposit in pelvis of left kidney. Bowels and mesentary infiltrated. Rectum filled with hardened faeces.

Nineteen fractures around the chest. The ribs upon removal proved as brittle as pipe-stems. The number and location of the various fractures could not possibly have occurred in healthy bone except by running the patient through a threshing machine.

The coroner decided, after taking all the obtainable evidence, that patient had not been abused, nor suffered from undue or unusual violence, but that the fractures were due to the obscure disease known as fragilitas ossium.

THE RELATIONS OF ALCOHOLIC INDULGENCE TO INSANITY.

BY H. M. BANNISTER, M. D., Chicago, Ill., and G. ALDER BLUMER, M. D., Utica, N. Y.

The influence of the excessive use of alcohol in the production of insanity is one of the certainties, and yet there is occasionally a question raised as to the relative importance of this causal factor. A few years ago a physician, since a superintendent of one of our large State asylums, wrote a paper to show that its effects were insignificant, and in one way or another there has been produced a considerable literature on this side of the question. Nevertheless it may be fairly assumed that alcoholic intemperance is generally admitted to be a very important, if indeed not actually the most important, cause of mental disorder. Those who would dispute it are comparatively insignificant in number among alienists, and there is not any preponderance of scientific authority against it.

There are, however, certain questions that arise in this connection that are not so readily disposed of. While it is admitted that alcoholic excesses tend to mental break-down, while acute and chronic alcoholism are disorders that are universally recognized as appertaining more or less to the specialty of psychiatrical medicine, there is yet room for a wide difference of opinion as to the effect of the use of alcoholic drinks in what is called moderation. There is certainly enough excess to produce a very large percentage of insanity in our asylums, but data are too generally insufficient for us to be able to say with exactness the proportion of cases in which it has certainly been an etiological factor. These are by no means always what would be classed as cases of alcoholic insanity, as we are well aware, and often there may be nothing in the history as well as in the symptoms to point directly to any such origin. Intemperance is a disreputable fact and is likely to be concealed or denied, even when it may have been excessive. It is very possible that this tendency far overbalances the contrary one of making erroneous *post hoc, ergo propter hoc*, diagnoses of insanity from alcoholism on account of prior known habits when really other causes are to blame, in asylum statistics, and that our figures of mental diseases of alcoholic origin are much below, rather than above, the truth.

The questions, therefore, that arise as regards the influence of alcohol in the production of insanity may be stated as follows:

1. Does alcoholic excess produce insanity? This, as already stated, may be regarded as an indisputable fact.

2. In what proportion of cases is this factor to be admitted? This is one to which various answers have been made, as indicated. The majority of reliable authorities place the percentage of cases directly due to this cause at not less than 10 or 12 per cent; some recent writers have estimated it much higher, and consider the increase of insanity in modern times as very largely due to such excesses. This is the view held by Smith of Marbach in a paper read last November before the Southwestern German Society of Alienists, and Garnier of Paris, in a communication a year or two ago, claimed that insanity had increased 30 per cent in the last fifteen years in that metropolis, largely from this cause, and that alcoholic insanity, properly so-called, had increased in that period threefold. Those who have minified the influence of intemperance to producing below 10 per cent are very few and include no recent high authorities. We may therefore safely assume that at least 10 per cent, and probably more, of the cases of insanity in most civilized countries are directly due to alcoholic excesses. If we include only males, the percentage will naturally be higher, as alcoholic insanity is comparatively infrequent in women, and if we admit it as an indirect cause, we must add a considerable proportion of all cases of insanity in both sexes as more or less influenced by this factor. The poverty and misery induced by intemperance, the impaired constitutions, the reckless exposures, the traumatisms, etc., will all have to be considered. We might also add the defective organization inherited by the children of drunkards under this head to still further swell the percentage.

3. What constitutes excess in the use of alcohol, and what is the influence on the production of insanity, of what is considered its non-excessive usage? This is the most complicated question of all, and the one that is hardest to answer satisfactorily. The often quoted experimental investigations of Anstie, Parkes and Wollowicz, and of Dujardin Beaumetz, seem to show that, under normal conditions, between one and two ounces daily, or not much over the latter figure, of absolute alcohol is about what an average robust individual can stand, and that any amount above that is beyond the danger limit, or more than the system can dispose of with safety. This, however, only applies to perfectly healthy and normal individuals,

and does not cover all the possibilities of either tolerance or intolerance of alcohol. We know very well that for almost all time some individuals have been using intoxicants to a far greater extent than is above indicated, without any very apparent directly damaging effects upon themselves, so far as known. On the other hand, perhaps, a greater number will be seriously injured by even less than the minimum here given. Moreover, the not finding alcohol in the urine does not positively show that the system is innocuously disposing of all that is ingested; there may be more or less injury to the nervous system, even from a small amount. There is no class of agents that have their effects more modified by individual idiosyncrasy than stimulants, and of these alcohol probably takes the lead in this respect. The same dose will affect one man in his brain, another in his cord, and a third perhaps in neither. Steady drinking will cause often the most opposite effects, both physical and mental, according to the individual; with the same kind and quantity one man is jovial, florid, and red-nosed; another is pallid, taciturn, and surly; one man is incoördinate, with a comparatively clear head; another has his judgment and temper awry, without any apparent bodily symptoms whatever.

As regards small amounts of pure alcohol, the same holds true—there is no general universal standard of moderation. When we consider, however, that it is seldom taken pure, and that its physiological action is complicated by the other more or less active constituents in the usual beverages, to say nothing of the unknown adulterations, it will be seen that the question is a very complex one. According to Dujardin Beaumetz, bad brandy is more directly toxic than absolute alcohol, and that is the character undoubtedly of a large proportion of the drinks now commonly used by more or less habitual drinkers.

The chief action of alcohol, however, is that which it exerts upon the brain and nervous system, and it is for that that it is used as a beverage by mankind; whatever benefit it may be as a food, a retarder of tissue waste, or an assistant to digestion, is a very secondary matter, and is not usually regarded by the drinker except as a convenient excuse for the indulgence. It would not be unnatural to suppose that a normal brain has no need of alcohol, and that the effects of so active an agent on one inclined in any way to be abnormal might be deleterious, and that in the way it is commonly taken, with all its associated more or less active substances, some of which are even more potent for evil than itself, this would be

still more likely to be the case. There is, therefore, a reasonable doubt, at least, as to the safety to mental health of even small continued doses of alcoholic drinks, and the burden of proof lies on the side of those who would dispute this conclusion.

Practically there is no standard of moderation in the use of alcoholic drinks, and it is therefore impossible to use statistics to determine the effect of moderate drinking in the production of insanity. What would be moderation in one would be excess in many more, and the statements of habitual drinkers can not always be accepted as to their habits. The only way actual statistics could be obtained would be from the fullest and most carefully studied individual histories, covering not only the facts of the life of the patient himself, but also those of his ancestors for at least two or three generations. Charcot is credited with saying that, "every drop of the seminal fluid of a drunkard contains the germ of all the neuropathies." This being so we will have, in order to positively eliminate the agency, direct and remote, of alcohol, to search the pedigrees and family histories to find the neuropathic taint thus originating that may develop into insanity, possibly of the alcoholic type, possibly in any other form, in the descendant of the original transmitter. A habitual user of alcohol may, it may be possibly admitted, show no bad results in his own person and yet pass on a deteriorated nervous constitution to his offspring. The effects on the individual himself may be slow in developing, and may require a skilled medical diagnosis for their recognition as of alcoholic origin, however serious they may be. It would be of interest to know what proportions of cases of senile insanity and late organic dementia occur in abstainers and in those who have been accustomed to the occasional or habitual moderate use of alcoholic drinks, and in this line is perhaps the best hope of finding any value in statistics for answering this particular question. If moderate drinking has any effect in causing insanity, it might be naturally supposed that it would be late rather than early in its appearance.

It has been already mentioned that we have to consider not merely the alcohol but the other constituents of the ordinary beverages when taking account of the pathological effects of these latter. Pure alcohol is very little used as a beverage, and when so used, as by the Scandinavians in some parts of our country, it is nearly always to excess, and the effects are obvious and indisputable. In the ordinary spirituous liquors we have not only ethylic, but also the higher, more toxic alcohols in greater or less proportion, together

with various ethers and other substances, many of which are powerful neurotics, to say nothing of unknown adulterations that may be more or less harmful. These last, together with the ethers, etc., occur also in the various wines, especially the imported ones. In beer we have had of late years a number of new constituents, as there have been extensive changes in its manufacture. Malt liquor would seem to be a misnomer for some of the beer of to-day, as glucose is said to have largely superseded malt in some beers, and where the cereals are employed they are likely to be rice or corn (meal), etc., instead of the traditional barley. Whether these changes render the drink any worse as regards its action on the nervous system may perhaps be a question, but is one the consideration of which complicates the subject. The amount of the nervous depressant lupulin with the alcohol taken into the system is also worth bearing in mind in the consideration of the possible effects of beer, in favoring insanity. *A priori*, it would seem that it might have such action, but as yet actual satisfactory data are hard to obtain. That the moderate use of alcohol, generally in the form of beer, has a bad effect in actual existing mental disease is supported by the testimony of English (thirty out of fifty superintendents reporting), German (Kraepelin), and Swiss (Forel) alienists who have had experience with and without its usage.

The answer to the third question, therefore, is a complicated one. There is no exact standard of moderation in drink; the minimum quantity is injurious to some, while others are apparently unaffected injuriously by very large amounts. If we could put all moderate drinkers on a certain ration, really moderate and within the limit given by Parkes and others, of alcoholic drinks and keep them to it, and we could after a time ascertain their physical personal equations as to endurance of alcohol, some generalizations could be made from statistics. Where this has been done, as, for example, in the population of some asylums in Europe, the weight of evidence is rather against the absolute innocuousness of alcohol so used. The conditions there, however, are not those of the average population, and can not be accepted as applying directly to the question of the production of insanity by alcohol.

There may also be some little value to statistics of organic and senile insanities as occurring in known moderate drinkers and in abstainers.

The answer to the question is complicated by the uncertainties as to the exact toxic value of the drinks used; the other neurotic

constituents besides the alcohol they contain; by the effects of climate, age, individual idiosyncrasies, etc.; by the possibilities of the late developments from long continued dosing and those of hereditary transmission, and especially by the varying and often very liberal notions of drinkers as to what moderation is, and the tendency of even moderate drinking to lead to excess in individuals possessing any neurotic or hereditary taint.

A priori, it would seem probable that even the moderate use of powerful neurotic agencies would at least have no beneficial effect on a normally constituted brain, and that in one at all abnormal, when used simply as an indulgence and not under any scientific medical supervision, there might be serious chances of positive injury.

Our knowledge of the effects of alcohol in the production of insanity may, therefore, be summed up as follows:

1. Alcoholic excesses produce insanity.
2. They are directly the cause of at least 10 or 12 per cent, and probably of a somewhat larger percentage. Indirectly they are among the causal factors of a very large proportion of cases that can not be directly credited to alcohol.
3. Moderate drinking is a very indefinite term, and this fact alone makes it impossible to utilize satisfactorily any statistics as to its effect in producing mental disease. There is, however, no reason to believe that moderate indulgence in alcohol is specially conducive to mental health in the average individual, and there is, on the other hand, a certain amount of physiological *a priori* presumption to the contrary. For the victim of hereditary taint or the neurotic it is undoubtedly often disastrous in its effects in this direction.

A CASE OF PARETIC DEMENTIA OF LONG DURATION.

BY W. L. WORCESTER, A. M., M. D.,
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On the third of October, 1895, Jane M., a woman admitted to the hospital June 23, 1881, died with the symptoms of exhaustion from paretic dementia. At the time of her admission the diagnosis recorded was secondary dementia, but the symptoms then recorded seemed, to say the least, highly suspicious of the disease which became, to my mind, unequivocal. Assuming that the case was at that time of such a nature, its long duration would render it exceptional, but the records contained a statement that she had been, several years previously, an inmate of the Taunton (Mass.) Hospital, and a transcript of the records of her case while in that institution indicated that her mental disorder was of long standing at the time of her admission there.

The report of the case, furnished from the Taunton Hospital, is as follows:

"Jane M.; age, 40; nativity, Ireland; occupation, domestic; residence, Boston, Mass.; duration of insanity, many years; diagnosis, chronic mania. Admitted May 11, 1874. Discharged April 3, 1875."

Hospital History.—When admitted she suffered from delusions of poisoning, and was said to have haunted the Superior Court for years under the delusion that she had a suit there. She was fault-finding and prone to incite others against hospital authorities. She improved physically, but mentally remained about the same. On the above date she was removed to the Tewksbury Almshouse, by order of the State Board of Lunacy and Charity.

The facts furnished by the records of this hospital are as follows:

Admitted June 23, 1881; native of Ireland; aged 50; domestic; single; age at first attack, 42; diagnosis, dementia — secondary.

Physician's Certificate.—Arrested and brought to the Tombs by the police. No history obtained. Was a patient at the Taunton Hospital seven years since. Excitable, very talkative, and disconnected. She believes that she has been poisoned by a certain doctor, who would put her out of the way if he could, that he might not be found out; that she has recovered a large amount of money from him in a suit; that the British Government has given her \$15,000 to-day; that she has heard the above doctor and oth-

ers talking about her cell last night, and that she was to be married last night to a lawyer on Beacon Street, and that another lawyer gave \$2,000 to have her arrested, because he wanted to marry her himself.

Examination.—A little below medium height, thin in flesh, gray hair, bluish gray eyes, pupil of right eye small and immobile to light; left, much more dilated, immobile also.

Previous History.—Father, James, born in Ireland; mother, Mary (nee F.), born in Ireland. Is a Roman Catholic, has always been considered eccentric, and not ordinarily intelligent; education limited, temperate habits, cheerful and frank by nature. Eight years ago spent a year at Taunton.

It is believed by her friends that a disappointment in marrying first caused her alienation. First decided symptoms observed twelve years ago. Has had a delusion that she was about to marry some rich man. Has grown thin in flesh and more demented. Has always been harmless and very happy in disposition. Neat in habits.

Hospital Notes.—October 21, 1881.—Marked delusions of hearing. Listens at the ventilators and floor to people whom she thinks are talking to her. Says that her people are here. Is quiet, tractable, not untidy.

April 20, 1882.—Continues to hear devils. At times is quite noisy. Scolds incoherently and breaks glass.

November 8, 1884.—Walks the floor most of the time, listening in a mysterious way to voices which come from below. Is very much demented. Says she has five gifts in her eye and must walk all the time and be fed on bread and water. Is tidy in her habits. The pupil of the left eye is dilated and immobile and the lens appears to be cloudy.

From this time until the following date there are only brief notes to the effect that her condition is unchanged.

March 1, 1892.—Has not changed very much up to date, but has been growing more demented and senile. To-day was very stupid, somnolent, and weak.

December 7, 1892.—Has just had two well-marked epileptic convulsions. Has become untidy.

January, 1894.—Has had a few epileptic convulsions, at night usually, since last record. Much demented; untidy.

April 1, 1895.—Very demented and weak. Walks about the ward, but is so feeble that she often falls and hurts herself. Always good-natured; very untidy. No convulsions recorded lately.

April 21, 1895.—Had a convulsion two days ago and another last night. Has been in bed for three days, in a weak, confused way.

May 12, 1895.—Her pupils are unequal, left considerably dilated, and both immobile to light. Articulation very indistinct. Knee-jerks absent. Walk feeble. Stands without swaying, with eyes closed. Very much demented. The circulation is very feeble; extremities blue and cold.

From about this time on, she was confined to bed, gradually growing weaker and more demented, until her death, October 3, 1895. No necropsy was allowed.

Although it does not appear that the diagnosis of parietic dementia had been made by any of the physicians who had previously had charge of the patient, I had no hesitation from the time, in May, 1895, when my attention was first called to her, in pronouncing the case to be of that nature, and never saw any reason to doubt the correctness of my diagnosis, which seems to me to be fully borne out by the history of the case in this institution. Extravagant delusions, inequality and immobility of pupils, convulsive seizures, defective articulation, progressive dementia, and paresis — practically all of the classical symptoms of the disease — are shown to have been present, and there seems to be nothing to throw doubt upon the diagnosis except the uncommonly long duration of the case. It seems to me beyond reasonable doubt that the disease was developed at the time of the patient's admission here, in 1881 — over fourteen years before her death.

Are we to assume that the case was of this nature from the time, twelve years before her admission here, when symptoms of mental disturbance were first noticed? Such history as is given does not seem to favor this view, and I can see no reason for thinking it improbable that the subject of another psychosis may be as liable to develop the lesions and symptoms of general paresis as one of previously sound mind. The earlier observers of the disease — Esquirol, Georget, Delaye, and Calmeil — believed such to be the normal course of the disease, and this obsolete view is embalmed, so to speak, in the name still applied to it by most English writers — general paralysis of the insane. The belief that the paralytic symptoms were merely a complication of mania or melancholia rested, of course, on defective observation, but there seems to be no good reason to believe that a simple insanity would act as an infallible prophylactic against this, any more than against other forms of organic cerebral disease.

USES OF ELECTRICITY IN THE TREATMENT OF INSANITY.*

BY IRWIN H. NEFF, M. D.,
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Electricity in the treatment of insanity has not received the attention that it deserves. Any measure, whether it be palliative or curative, should have an important place in the therapeutic measures of a hospital for the insane. During the time electricity was being advanced as a therapeutical agent it was thought that insanity offered a rich field to demonstrate the efficiency of the electric current. It was accordingly used, found wanting, and discarded. Doubtless the disappointment in its effects was due to the ignorance of its properties and also of the methods of application. Since those days it has often been used sporadically in various ways with varying results.

Electricity, as we know, is not an empirical remedy. This is conceded by authorities. It is recognized, however, and has been repeatedly demonstrated, that the two forms of current have certain well-defined laws.

Arndt states as follows: "Every electric current, however excited, of whatever quality, is calculated to remove mental disorders, but not every current is capable of removing every mental derangement. On the contrary it may aggravate some forms and make them incurable."

Erb, in his statements, may appear too sanguine, but although his suggestions have been adversely criticised, his directions for treatment are based on scientific studies.

Electricity is a valuable agent for suggestive therapeutics, and doubtless some of its benefits are dependent on this property, but that it has an effect of its own can not be doubted.

In the psychoses electricity, as an agent for therapeutics, may be used with suggestion in connection with the treatment and without the use of such an agency.

Various modifications of the current are in use, but for all practical purposes the interrupted and continuous forms are alone essential. The determination for their individual use is founded on the

*Read before the "Association of Assistant Physicians of Hospitals for the Insane," "Michigan Asylum for Insane," Kalamazoo, Mich.

usual indications in general disease, remembering that as yet we have no certain rules for their selection. Central galvanization, galvanization of the head, general faradization, alone or with peripheral faradization, are the most important methods. These combined with the so-called electrical massage will be found to meet the usual demands.

In reference to the forms of insanity benefited and the contra-indications I will say only a few words.

It is of course in the primary insanities we expect it to act as a curative agent. Its remedial effect, however, may be obtained in many psychical disorders. My experience verifies the result of other investigators in this line, and I have, as far as possible, followed the methods suggested by them. As illustrating the benefit which may be obtained by appropriate treatment, I will give a few illustrations: Many of the vesanias, and especially those having a neurasthenic or hysterical basis, are accompanied by what are termed "cephalic sensations." In these cases galvanization of the head often produces speedy relief, and in many cases has a pronounced curative effect. Various muscular and visceral pains, also paresthesia, are, at times, benefited by some form of faradization, or, perhaps, central galvanization. Many female patients have definite points of spinal tenderness. An appropriate course of electricity is sometimes followed by a marked improvement. I mention these few symptoms merely to illustrate what a useful agent we have in the electrical current. I can not refrain, however, from mentioning one more property which is at times beneficial, viz., its tendency to promote sleep. It has been my custom for some time to have patients, after their treatment, resume a recumbent posture. It is surprising to find that some patients, who are habitually wakeful during the day or night, will secure a refreshing sleep. I might mention that this occurs without verbal suggestion. Whether it is due to natural exhaustion, or whether it is a quality of the current, I will not decide. Suffice to say that it is the opinion of all electro-therapeutists that electrical applications, and especially galvanization of the head, may induce sleep. You will find in all your cases that it will be an advantage to secure for your patients rest and quiet for a specified time after all your treatments.

Certain forms of insanity, especially those dependent on toxic agents or organic changes in the nervous system, are accompanied by a change in the electric excitability or nerve or muscle. In these cases electricity may be of considerable benefit in diagnosis.

Electricity as a suggestive agent may also prove a valuable method of treatment. I have in mind not a few cases where verbal suggestion has been employed with the application with a marked improvement in the mental condition of the patient, the improvement not being obtainable by ordinary suggestive measures.

The efficacy of any method of treatment is based on the systematic use of the medicant and a recognized method of procedure. A collection of the results will then enable us to make appropriate deductions. The use of electricity is governed by the same principles, viz., a systematic use of the agent and a recognized method of treatment. In all the recent works on psychiatry, you will find reference to electricity and measures recommended for its employment. I therefore think it useless for me to detail the various methods in use.

Every suitable case should be individually considered, the treatment carefully selected, and the method conscientiously pursued.

For the convenience of the physician and also as a means of reference and compilation, I should suggest a method of recording such as I now show you:

CHART FOR RECORDING ELECTRICAL TREATMENT.

Name.....J. B.
 Form of insanity.....Acute melancholia.
 Method of treatment.....Galvanization of head, 2-5 milliam.
 Interval between treatments..Every second day.
 Number of treatments.....Twenty.
 Result and remarks.....Recovery in three months.

Remembering that electricity is a powerful stimulating and sedative tonic, according to the form of current used and the manner of application, we can make the following statements:

1. Electricity is of benefit in many forms of insanity, and in the primary insanities may promote recovery.

2. Systematic use is demanded, and, dependent on the effect desired, a varying length of time should elapse between applications.

3. The choice of the current is governed by the ordinary rules for selection in electro-therapeutical work.

4. Electricity is valuable as a diagnostic agent in insanity, as indicating an intercurrent or complicating disease.

CONTRIBUTIONS TO GENERAL ETIOLOGY AND PATHOLOGY OF THE INSANE.

BY DR. ALES HRDLICKA.

- I. Etiological relation of tuberculosis to insanity.
 - II. Disorders of smell in the insane.
 - III. Reflexes in the insane.
 - IV. Investigations as to color-blindness and some psychological phenomena in the insane.
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I. ETIOLOGICAL RELATION OF TUBERCULOSIS TO INSANITY.

That tuberculosis bears *some* relation to insanity, and vice versa, has been recognized by all those who ever gave this subject attention; that the first disease could stand in any *etiological relation* to the second has been largely overlooked or but superficially considered. The physician of the insane saw his patients die three to five times as often from tuberculosis as the sane people, and generally concluded that disease of the mind predisposes its victims to the consumption, prepares them for it, without recognizing that such conditions are only too liable, as causes, to be reciprocal.

That it is only the *predisposition* that insanity in time induces, is self-evident from our knowledge of the real originators of tuberculosis, as well as from experience, which shows us that the mortality from it in the modern asylums can be reduced to and below the general outside average. In the Middletown State Hospital, where all the following investigations have been conducted, among 1,100 insane patients, there have been but three deaths from tuberculosis within the past year. During this time I have had the opportunity to become acquainted with every one of the deceased before the *exitus lethalis*, and with the majority of them at the autopsy table later, so that an under-estimate of that cause is quite improbable. The year before (October, 1893, to October, 1894) tuberculosis of some sort as one of the causes of death is registered in seven; at present (August, 1895) there are no more, but four or five cases with consolidation, for the most part chronic, of the apices, with no one of the patients presenting any other signs of consumption. Such is the practical result obtained by favorable climatic conditions of the hospital and strict hygiene, and it is only natural for it to be such; nevertheless, I have no doubt whatever but that the

predisposition to phthisis exists among the inmates in this, as in any like institution, waiting only for the up to now here fortunately checked contagion. To the interpretation of this "predisposition" we will return somewhat later.

One of the first observers to point out to some relation between these two diseases was McKinnon, who, as early as 1845, stated his conviction that "the scrofulous and insane constitutions are nearly allied"; and that "lung phthisis appears especially to stand in close connection with insanity." Landsberg (*Mania und Lungensucht*, Rust's Magazine, No. 64) believed that "insanity is often a result of phthisical dyscrasia." Hagen (*Allg. Zeitschr. f. Psych.*, Vol. 7) expresses in his statistical data and article, that "insane are five times as subject to tuberculosis as sane," and also that in the tuberculous insanity it is five times as frequent as in the non-tuberculous. "Tuberculosis may be both a causative or modifying cause of insanity" (Skae, Regis, Van der Kolk, Ball); and in a similar sense speaks Morel in his *Psychiatrie* (1860).

Of contemporary authors it is Clouston who has given the greatest attention to the relations of phthisis with insanity, and he quotes, in his article on phthisical insanity in Tuke's *Dict. of Psych. Med.*, the following: "Perhaps two-thirds, or even more, of idiots and imbeciles are of scrofulous constitution" (Ireland: Idiocy and Imbecility).

Van der Kolk (*Mental Diseases*): "It is remarkable that in the very same family some of the children suffer from mania or melancholia, and the brothers and sisters, who have remained free from these diseases, die of phthisis."

Guislain (*Lecons orales sur les Phrenopathies*): "Pulmonary tuberculosis appears to me to be in direct relationship with insanity; it is frequently seen in the descendants of the insane and in their progenitors."

Dr. James quotes Thompson as showing that, as to heredity, the two diseases are similar in the following respects: "1. Transmission is from either parent. 2. The disease may appear in the child before it is developed in the parent. 3. The disease may be transmitted by the parent without development in himself. 4. Atavism is a frequent and important characteristic." To which Clouston adds: 5. "The age at which the two diseases are most commonly developed is somewhat the same." Clouston believes the greatest risk of insanity is where both phthisis and insanity existed in the same family, more so than when either was alone. In his *Text*

Book on Insanity this same author speaks thus: "It is surprising how often both diseases, phthisis and insanity, occur in different members of the same family. They are too frequent to be a mere coincidence. The constitutional weakness which tends to end in phthisis is, I have no doubt, akin in some degree, under some conditions, to that which tends to end in insanity."

All these propositions seem clear, absolute, and the etiological relation of tuberculosis to insanity would appear by them established. And still, strange to say, however positive and clear to the point the majority of these statements seem to be, and although the very words used seem to speak for it, yet the etiological bearing of tuberculosis on insanity is by no means universally recognized. Almost all the authors of these statements neglect their own words and turn them to proof of the only fact seemingly apparent: Insanity leading to phthisical dyscrasia and thus more or less directly to the large percentage of deaths of this disease in the asylums. Some of the first statements on this matter, as for instance that of Landsberg, were ventured so early in the days of psychiatry that they are but mere indications of the lucid future. But with the late observers it seems a kind of unexplainable oversight not to have given a fact apparently important and intuitively observed their more extended and thorough attention. Take, for example, Clouston. He will clear points of resemblance of the two diseases; he will recognize their mixed occurrence in the same families, and the consequently arising greater gravity of both disorders; he goes even farther and expresses directly his conviction of them being akin in some form and degree one to the other; and, as the only consequence, he tries to establish a new form of insanity, the one with which tuberculosis, the developed disease already, is directly associated—the phthisical insanity, so-called; he has no word for the phthisical dyscrasia. And similarly, all the others.*

At such a state of things it is undoubtedly necessary to look into the subject a little closer. The most direct way to determine a point of this kind is by statistical investigation; but, before we have recourse to any statistics, let us see clearly what is really disease of mind and what is consumption.

* Since this was written, two American papers, bearing to a certain extent on this question, appeared: one on "Phthisis and the Neurotic Element," by Dr. Mays, and the other on "Phthisis and Insanity," by Dr. H. C. Tomlinson, both referred to in *N. Y. Med. Journal*, No. 859.

Tuberculosis, taken abstractly, is both a cause and a result of a certain general or constitutional, but especially pulmonary, weakness, and this weakness, which may be transmitted from parents to the progeny and take distinct shades in different individuals, we call dyscrasia phthisica. What is really a dyscrasia? The cells of the normal system have the power acquired during evolution of resisting the more common harmful influences, a self-preservative power, or a power of resistance. This power is compound. And again, there is a general resistance, or that common to all the cells of the body, and there is the resistance of each individual group of cells or that of the various organs. Being an established function of all the cells, such a resistance must have its representation in the nervous centers, as all stable conditions or properties of the cells have, and these nervous areas must be, besides appreciative: (1) Active or reactive, and (2) related directly with other parts of the central nervous system; and, all other functions being related more or less with the entire central nervous system, this must by analogy be the same. These are not theories, for we can prove them by many examples. All changes of the function, its centers, or their connections, must necessarily correspond and be directly proportionate to each other. Perfect centers will keep up perfect resistance; imperfect resistance, if of sufficient duration, will affect correspondingly its centers, and these the nervous entity. A temporarily diminished resistance of an organ is, according to its kind, its respective weakness. Permanent diminution of some form of resistance of a group of cells is a corresponding form of dyscrasia. Dyscrasia, defined, is a permanent, inherited, or acquired defect of some form of natural resistance of one or more groups of cells of the human body. Phthisical dyscrasia is a loss of that form of resistance of the body, and especially of the lungs, which, when present, hinders a man from acquiring tuberculosis. Insanity is a result of various extensive disorders of the brain, an organ that at once is an organ of appreciation of all conditions of the body, and an organ that more or less directly controls every part of the body. Now let any constitutional weakness, tuberculous or other, become established through long-continued outward causes, and, before the specific disease of the dyscrasia sets in, what have you found, but that the brain, really the trophic, sustaining, reactive center, is weakened correspondingly? In other words, how will you explain "dyscrasia" but as resting on a nervous basis? Now, a nervous, a brain weakness

of any kind, any extent, is a disorder; insanity is due to a brain disorder, and how far have we from one to the other? Every dyscrasia is, in a strict sense, besides the condition of the nervous system in general, a mild form of mental alienation; and as such, can it be other than one of the predisposing causes of the graver general brain disorders, the graver forms of mental alienation — the insanities?

Thus, and thus only, wish I my words to be understood. I do not believe, with all the apparent facts I have, tuberculosis to be a cause of insanity, no more than I believe rheumatism or paludism to be such, but I will maintain, as the result of my investigation, that the results of tuberculosis in any of their forms — in other words tuberculous dyscrasia of any kind — is, just as any other dyscrasia, the gouty, syphilitic, rachitic, etc., one of the causes of disease of the mind, or insanity.

Looking through psychological literature, I find I am not entirely isolated in the substance of these opinions, a fact which gives me much confidence in their veracity. According to Ball, insanity is "not a malady that commences, but one that finishes." (*Lec. sur les Mal. Ment.*, p. 34.) Speaking of the heredity of insanity, C. Mercier (*Tuke's Dict. of Psych. Med.*) says: "Much more important is the fact, far too insufficiently recognized, that the factor that is directly inherited is not insanity, but an instability or disordered arrangement of nervous tissue, which allows insanity to occur; and that we must look for the heritable antecedents of insanity not alone in insanity itself, as existing in progenitors, but in all maladies which display evidence of undue instability or disorder of the highest nervous arrangements." And Krafft-Ebing (*Psychiatria*, '93, p. 170) says: "There is no doubt that all that weakens the nervous system and the propagative powers of a person leads to neuropathic constitution, and thereby to all possible nervous disorders of the progeny." "A person does not inherit insanity, but a tendency or predisposition to it. The tendency is inherited from the stock, not merely from the immediate relations. A predisposition to insanity is not the heritage of something definite and known, passing from one generation to another in a definite and constant way, but rather of an uncertain bundle of obscure tendencies, which break up into various distributions." (*Maudsley: Pathology of Mind*, '95.) And again Maudsley, in the same work and edition: "It is not the insane variation that is inherited, but a native fault or flaw in the germ-plasm of the stock."

Thus supported, even though the citations were not written by their respective authors with the same points in view, I shall no more hesitate to assert tuberculous dyscrasia as one of the predisposing causes of insanity, and that of insanity in general, and will proceed to the direct statements which are to prove the proposition.

My investigation consisted of inquiries among insane, which I have employed all the means in my power to render reliable. The cases of tuberculosis in the families of the patients examined were divided into *near* (which comprise the parents, grandparents, brothers and sisters, and parents' brothers and sisters) and *distant*, or all other relatives beyond those named up to second cousins. Of the "near," I have specially extracted yet those of parents. The two hundred of each sex examined comprise the following mental disorders: Mania: acute, recurrent, and chronic; melancholia: acute and chronic; paranoia, epileptic insanity, general paresis, imbecility, terminal dementia, and a few miscellaneous cases. The respective numbers examined were:

	Men.	Women.		Men.	Women.
Mania, acute.....	8	7	Epileptic insanity.....	18	7
" recurrent.....	2	13	General paresis.....	5	..
" chronic.....	35	22	Imbecility.....	11	5
Melancholia, acute.....	14	17	Dementia, terminal.....	50	25
" chronic.....	17	34	Miscellaneous.....	20	14
Paranoia.....	20	56			

The results, given in percentage, are as follows:

	Men.	Women.		Men.	Women.
MANIA ACUTA:			MELANCHOLIA ACUTA — Continued.		
Tuberculosis in family:			Tuberculosis in family:		
Near.....	25 %	71 %	Absent.....	21.5 %	12 %
Parents.....	..	..	Doubtful.....	35.5	18 "
Distant.....	14 "	14 "	MELANCHOLIA CHRONICA:		
Absent.....	25 "	14 "	Tuberculosis in family:		
Doubtful.....	50 "	..	Near.....	47 "	44 "
MANIA RECURRENT:			Parents.....	18 "	9 "
Tuberculosis in family:			Distant.....	..	9 "
Near.....	50 "	53.5	Absent.....	29 "	20 "
Parents.....	..	23.5	Doubtful.....	23 "	26 "
Distant.....	..	15.5	PARANOIA:		
Absent.....	50 "	7.5	Tuberculosis in family:		
Doubtful.....	..	23.5	Near.....	30 "	43 "
MANIA CHRONICA:			Parents.....	5 "	16 "
Tuberculosis in family:			Distant.....	..	4 "
Near.....	34 "	43 "	Absent.....	30 "	22 "
Parents.....	9 "	19 "	Doubtful.....	40 "	31 "
Distant.....	3 "	..	EPILEPTIC INSANITY:		
Absent.....	15 "	19 "	Tuberculosis in family:		
Doubtful.....	48 "	38 "	Near.....	28 "	57.5
MELANCHOLIA ACUTA:			Parents.....	5.5	..
Tuberculosis in family:			Distant.....	..	..
Near.....	35.5	65 "	Absent.....	22 "	..
Parents.....	14 "	23 "	Doubtful.....	50 "	43 "
Distant.....	7 "	6 "			

	Men.	Women.		Men.	Women.
GENERAL PARESIS:			DEMENTIA, TERMINAL:		
Tuberculosis in family:			Tuberculosis in family:		
Near	40 %	..	Near	22 %	44 %
Parents .....	..	..	Parents	22 "	18 "
Distant .....	..	..	Distant .....	..	8 "
Absent	40 "	..	Absent	26 "	16 "
Doubtful	20 "	..	Doubtful	52 "	32 "
IMBECILITY:			THE TOTAL AVERAGE —		
Tuberculosis in family:			(including few miscellaneous cases):		
Near	36 "	40 %	Tuberculosis in family:		
Parents .....	..	8 "	Near	32 %	47 %
Distant	9 "	..	Parents	9 "	17 "
Absent	36 "	20 "	Distant	2 "	6 "
Doubtful	18 "	40 "	Absent	25.5	17.5
			Doubtful	40.5	29.5

Is there necessary more than a glimpse at these figures to prove their importance? In men 34 and in women 53 per cent of tuberculosis in the family, and in the majority of cases in more than one member! Could such phenomenon be without its value — without a considerable value? And these high numbers bear no trace of exaggeration — rather the reverse. The occurrence of the disease in the families of the patients is, if anything, greater, because: (a) Whilst cases of the disease in the immediate relation are remembered well, those in remote are not known, perhaps not at all, or uncertainly, and such cases had to be included in the "absent" column. (b) In many cases there is more or less ignorance about the existence and whereabouts of the relatives, and consequently their fate is not known; in a few instances this ignorance included absolutely all the relatives — and these cases had to be classed with the "doubtful." (c) In some cases the knowledge of family history has been lost ever since the patient has been in the hospital, which might have been any period of the last ten years, and relatives might have succumbed to the disease in the meantime; some of these cases were classified with the absent (where the time was moderate), the rest with the doubtful. (d) Some of the relatives, who might have transmitted the trait already, and this produced its effects, may be still living and apparently well, and may later, or may not at all, succumb to consumption. (e) As only cases of pulmonary tuberculosis were inquired after, whilst the active disease presents many more types, which it would be impossible to ascertain, yet which can transmit the diathesis just as the pulmonary form, it is certain that many instances were omitted in this way.

The inheritance in the female predominates considerably over that in the male sex. It is a well-known fact that the direct hered-

ity of insanity is also greater in woman, and in somewhat similar relation of percentage — though I would not attach to this relation any specific importance. Both are due, no doubt, to the somewhat inferior resistance of the woman, and to the peculiarities of her mental and physical life. In the different forms of mental disease, if I may be permitted to still, for convenience, employ that ambiguous term, there is an accord between the two sexes only in mania recurrens, chronic melancholia, and imbecility; in all the other forms of alienation the “tare” in women predominates, though a due allowance must be made for the respective numbers examined. Considering all, the always (and especially with the insane) possible errors of information, and, again, the only too probable existence of positive cases among the doubtful, I think we can safely venture to state that some form of tuberculous heredity or other exists in from 40 to 50 per cent of male, and in from 55 to 60 per cent of female, insane patients. Shall we neglect, in our etiology of insanity, a factor of such a potency still further?

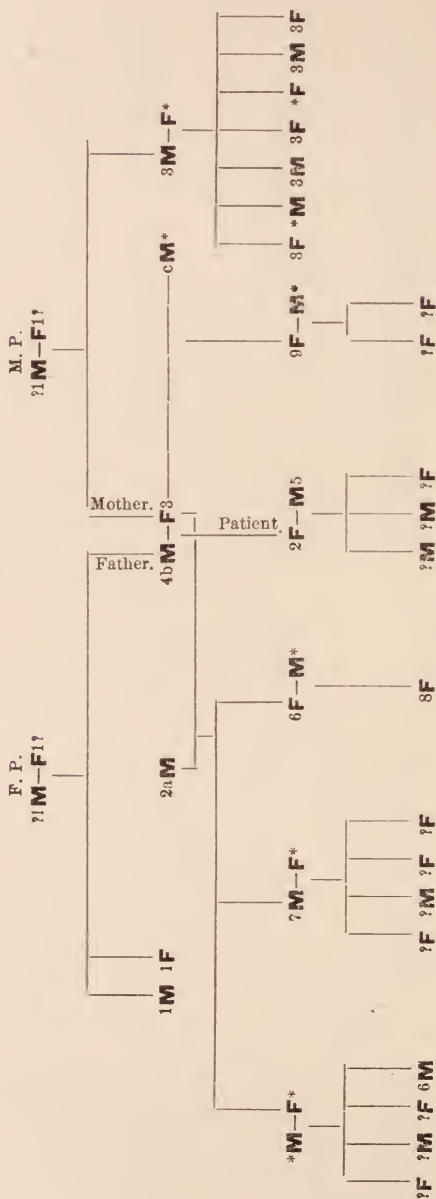
As a termination to my article, I beg to append several genealogical tables, taken at random. They will illustrate better than many words the degenerative conditions in some of the families of the patients.

II. DISORDERS OF SMELL IN THE INSANE.

Would someone ask me what relation the organs of smell bear to insanity, I should have to admit, to the full extent of the word, I do not know, just as I do not know exactly what relation any other organs of special sense can bear to the disease; nor have I found anyone else who knows or even pretends to do so. But, among twenty consecutive autopsies I made within the last two quarters of '94 and the first quarter of '95, I found five cases, or 25 per cent, where the olfactory nerves were in far advanced, or complete, states of degeneration, a fact which led me to the subsequent inquiries and examinations, the abstract of which is here presented. These autopsies were all made within twenty-four hours of death, so that the conditions found could not have been due to post-mortem changes.

It is remarkable how little attention the pathology of the olfactory nerve has yet received. Ziegler, in his great work on pathological anatomy (6 ed.), finds no place for this nerve, and the same is nearly true for Klebs, Green, and other general pathologists. Rosenthal and Groves make a few general remarks on it. The first observer says (*Dis. of the Nerv. Syst.*, p. 187): “In insanity,

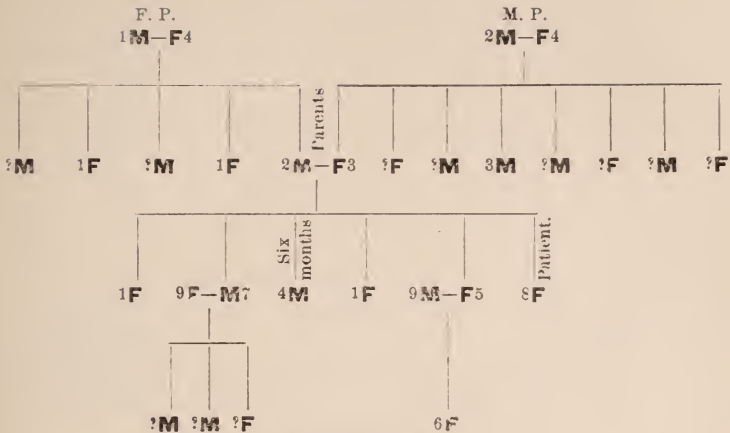
II. CASE 568.



EXPLANATION.

- 1 Dead, cause unknown. 2 Insane; the patient: paranoiac, and had a ves. calculus; musical; poetic.
 3 Tuberculosis: mother, uncle, five first cousins. 4 Vesical calculus. 5 Cancer. 6 Constitution feeble.
 7 "Peculiar" (mentally). 8 Subject to headaches; depressible. 9 Abscess of the brain, spontaneous.
 a Mother's first husband. b Mother's second husband. c Mother's third husband.

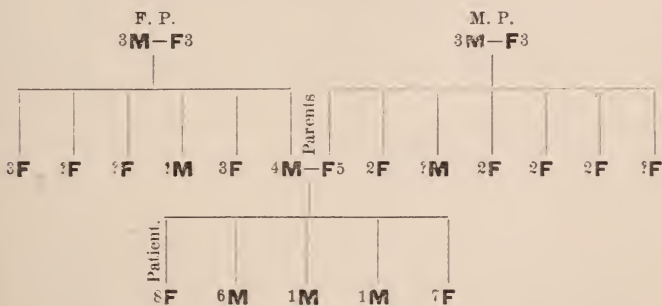
III. CASE 4171.



EXPLANATION.

- 1 Phthisis—Grandfather, two uncles, and two sisters.
- 2 Dysentery—Maternal grandfather; father.
- 3 Apoplexy (cerebral hæmorrhage)—mother. uncle.
- 4 Cause unknown.
- 5 Feeble constitution; death at first childbirth.
- 6 Marasmatic; death in two weeks.
- 7 Chronic digestive troubles.
- 8 The patient—spontaneous delirious excitement, followed by melancholia; debility; morphine habit acquired.
- 9 Healthy.

IV. CASE 2704.



EXPLANATION.

- 1 Normal.
- 2 Phthisis—mother, four sisters.
- 3 Dead; cause unknown.
- 4 Father died of Bright's disease; severe rheumatism for many years.
- 5 Mother always feeble; chronic bowel trouble; spontaneous cataract, both eyes.
- 6 Sister subject to neuralgia.
- 7 Brother had epilepsy up to twenty; chronic rheumatism.
- 8 The patient—hypochondrous melancholiac; congenitally deformed (internal organs of generation).

in which subjective olfactory sensations exist, softening of the olfactory nerve, neoplasms of the base of the brain extending to the anterior lobe, softening or discoloration of the olfactory bulb, and adhesions of the olfactory nerves to the dura mater, have been discovered." Speaking of anosmia, he does not even mention its occurrence among the alienated. Gowers thinks (*Nerv. Dis.*, '88, p. 567) "anosmia is less frequently due to a lesion of the nerve than to disease of the mucous membrane of the nose, chronic inflammations, polypi, etc.," and, "in diseases of the cerebral hemispheres loss of smell is rare," and "functional loss occurs in hysterical hemianæsthesia" (568). Alienists like Tuke, Krafft-Ebing, Griesinger, Spitzka, Hammond, Ball, restrict themselves to the simple consideration of smell hallucinations. Erb (*Ziemsens's Enc.*, Vol. II, p. 262), acknowledges the existence of anosmia in the insane, but believes it "of central origin," and with similar results we may go from one investigator to another; and yet, direct examination on the living insane shows us a marked to an absolute anosmia in 30 per cent of the fair number of four hundred examined, and all these were yet the more recent and lighter cases of insanity.

The same two hundred of each sex were examined as in the first instance, and throughout, and hence were patients of enough intelligence to appreciate and respond to a feeling. Precautions were taken that each patient should know nothing of the nature of the examination before subjected to it. Cases of apparent nasal troubles or colds were avoided, or examined over. In many cases the deficiency found was acknowledged as having been observed already before by the patient himself.

The method of examination was as follows: Three test-tubes of a narrow caliber were taken and filled to about a half with (*a*) a 10 per cent solution of essence of peppermint in oil, (*b*) tincture of camphor, and (*c*) dilute ammonia. These test substances were not picked out entirely arbitrarily. They were chosen, first, as the most common and generally known flavors, and second, on account of the fact that many patients with a moderately dulled smell mistake one for the other, pronouncing ol. menthæ camphor and camphor ammonia. At about the upper end of the third-fourth of each test-tube (from below), a somewhat tightly fitting sponge-plug was placed; it served both as a preventive of spilling the contents, or some of the patients drinking them, and as a moderator of the odor.

Ol. menthæ, having the most transient effect on the olfactory nerve of the three substances chosen, was used first in testing, and was followed by camphor and then ammonia, and enough time and trials were afforded before a decision was formed as to the state of the sense; in consequence there can not be, however delicate be such an examination, much error.

The cases as found were divided into three classes, namely, the normal, or about so, the moderately dulled, and the much dulled to absent. As moderately dulled all those cases were classed which either had difficulty in recognizing the test substances, though familiar with them in general, or who would not recognize one or another at all. Positive anosmia is not easily decided. In many cases where the olfactory nerve is largely affected, the innervation of the fifth is normal or the sensibility of this nerve seems to be even increased, and stronger smells, especially ammonia, are recognized by this sensation and not the smell proper, and hence all such cases were, to avoid false conclusions, included with the considerably dulled under "dull to extinct." I would here again call attention to the fact that the four hundred examined represent practically the lighter cases, in which we would not expect the worst conditions.

Smell, where deficient, was found so in almost all the cases on both sides. No records of hyperæsthesia of the sense were made, and that for the following reasons: Hyperæsthesia of smell is in most its insane owners only subjective, or rather a pathological condition of the centers, and on examination of the organ really an opposite condition is found, that is more or less of anosmia. And there are forms of an intermediate state of affairs, I am sure, where, at the beginning of the degenerative process of the nerve, the condition is manifested as both, outwardly as dulling of the sense and inwardly as its hyperæsthesia. Of course we are absolutely unable to divide such different cases one from the other. True cases of hyperosmia, that is those not dependent on any organic changes, or at least any such of longer duration, are rare, are liable to be periodical, and occur mostly connected with hysteria.

The epileptics form an interesting class of their own; they have all a pronounced hyperæsthesia of the nasal branches of the trigeminus, whilst the olfactory in almost all is greatly dulled.

The following are the brief results of the examination; may they throw some light on one class of the obscure phenomena connected with disease of the mind:

	Men.	Women.		Men.	Women.
MANIA ACUTA:			PARANOIA—Continued.		
Smell: Normal....	37.5 %	57 %	Smell: Dull to ext..	35 %	22 %
Mod. dull.....	50 "	29 "	EPILEPTIC INSANITY:		
Dull to extinct...	12.5 "	14 "	Smell: Normal....	5.5 "	28.5 "
MANIA RECURRENS:			Mod. dull.....	22 "	14 "
Smell: Normal....	50 "	46 "	Dull to extinct...	72.5 "	57.5 "
Mod. dull.....	50 "	15.5 "	GENERAL PARESIS:		
Dull to extinct....		38.5 "	Smell: Normal....		
MANIA CHRONICA:			Mod. dull.....	40 "	
Smell: Normal....	37 "	48 "	Dull to extinct...	60 "	
Mod. dull.....	40 "	28 "	IMBECILITY:		
Dull to extinct...	23 "	24 "	Smell: Normal....	45 "	40 "
MELANCHOLIA ACUTA:			Mod. dull.....	18 "	60 "
Smell: Normal....	57 "	60 "	Dull to extinct...	36 "	
Mod. dull.....	21.5 "	23 "	DEMENTIA TERMINAL:		
Dull to extinct...	21.5 "	18 "	Smell: Normal....	28 "	32 "
MELANCHOLIA CHRONICA:			Mod. dull.....	40 "	20 "
Smell: Normal....	29 "	50 "	Dull to extinct...	32 "	48 "
Mod. dull.....	41 "	20 "	GENERAL AVERAGE (a few miscella-		
Dull to extinct...	29 "	32 "	neous cases included):		
PARANOIA:			Smell: Normal....	34 %	44.5 %
Smell: Normal....	40 "	43 "	Mod. dull.....	33 "	26.5 "
Mod. dull.....	25 "	35 "	Dull to extinct...	33 "	29 "

III. REFLEXES IN THE INSANE.

Insanity has, as yet, no concomitant pathology of the nervous system in general, with the exception, perhaps, of general paresis, and few specific disorders; nor do I think, with our present knowledge, any such can be formed. Nerve disorders are by no means unfrequent in mental disease, and may, in most instances, be proven to be due to it and dependent on it, but they are so variable in the same form of insanity, and again the same symptoms occur irregularly in so many forms of the disease, that we are unable to form, with regard to them, many definite conclusions.

Whenever the nervous system participates in any pathological process, be it substantially or sympathetically, the first affected are usually the parts controlled by the sympathetic; next come the special senses, then reflexes, and finally the voluntary nervous apparatus—gray nervous tissue first, white last. A year ago (Middl. State Hosp. Rep. for 1895, p. 174) I made quite an extended inquiry into the defects of sight and hearing in the insane; this year it were those of the smell, and then reflexes. Feeling and taste, the remaining two senses, although an effort has also been made to inquire into their condition, had to be omitted, on account of insurmountable difficulties such an examination presents with the insane. Suffice it to say in this place, that both these senses present, in this class of patients, many highly interesting and often unsuspected deviations from normal.

Irideal and patellar—the most important and decisive reflexes—were investigated only. In irideal both were examined, the light reflex and that of accommodation.

True nervous diseases existing outside, and probably before the insanity (a fact remarkably rare), were excluded. The results of the examinations are as follows:

MANIA ACUTA.				MELANCHOLIA ACUTA—Continued.			
		Men.	Women.		Men.	Women.	
Light:	Normal....	75	% 57	Patellar: increased..	21.5	% 12	%
	Diminished..	12.5	" 43	Absent.....	..	..	..
	Absent.....	12.5	" ..	MELANCHOLIA CHRONICA.			
Reflexes—Irideal:				Light: Normal....	77	" 74	"
Accom'n: Normal..	62.5	" 57	"	Diminished..	17	" 23	"
Diminished..	37.5	" 43	"	Absent.....	6	" 3	"
Absent.....	..	" ..	"	Reflexes—Irideal:			
Patellar:				Accom'n: Normal..	73	" 77	"
Normal....	25	" 29	"	Diminished..	12	" 23	"
Diminished..	62.5	" 43	"	Absent.....	6	" ..	"
Increased....	..	29	"	Patellar:			
Absent.....	12.5	" ..	"	Normal....	29	" 44	"
MANIA RECURRENTS.				Diminished..	29	" 32	"
Light: Normal....	50	" 69	"	Increased....	35	" 20	"
Diminished..	50	" 31	"	Absent.....	6	" 3	"
Absent.....	..	" ..	"	PARANOIA.			
Reflexes—Irideal:				Light: Normal....	35	" 84	"
Accom'n: Normal..	50	" 84.5	"	Diminished..	10	" 14	"
Diminished..	50	" 15.5	"	Absent.....	5	" 2	"
Absent.....	..	" ..	"	Reflexes—Irideal:			
Patellar:				Accom'n: Normal..	85	" 87	"
Normal.....	..	15.5	"	Diminished..	15	" 11	"
Diminished..	100	" 53.5	"	Absent.....	..	2	"
Increased.....	..	31	"	Patellar:			
Absent.....	..	" ..	"	Normal....	40	" 54	"
MANIA CHRONICA.				Diminished..	25	" 22	"
Light: Normal....	77	" 86	"	Increased....	35	" 20	"
Diminished..	20	" 14	"	Absent.....	..	4	"
Absent.....	3	" ..	"	EPILEPTIC INSANITY.			
Reflexes—Irideal:				Light: Normal....	94.5	" 100	"
Accom'n: Normal..	68	" 95	"	Diminished..	5.5	" ..	"
Diminished..	29	" 5	"	Absent.....	..	" ..	"
Absent.....	3	" ..	"	Reflexes—Irideal:			
Patellar:				Accom'n: Normal..	94.5	" 100	"
Normal....	55	" 53	"	Diminished..	5.5	" ..	"
Diminished..	15	" 28	"	Absent.....	..	" ..	"
Increased....	29	" 14	"	Patellar:			
Absent.....	3	" 5	"	Normal....	67	" 28	"
MELANCHOLIA ACUTA.				Diminished..	22	" 43	"
Light: Normal....	78.5	" 83	"	Increased....	55	" 28	"
Diminished..	21.5	" 18	"	Absent.....	5.5	" ..	"
Absent.....	..	" ..	"	GENERAL PARESIS.			
Reflexes—Irideal:				Light: Normal....	60	" ..	"
Accom'n: Normal..	93	" 89	"	Diminished..	40	" ..	"
Diminished..	7	" 12	"	Absent.....	..	" ..	"
Absent.....	..	" ..	"	Reflexes—Irideal:			
Patellar:				Accom'n: Normal..	40	" ..	"
Normal....	43	" 65	"	Diminished..	60	" ..	"
Diminished..	35.5	" 23	"	Absent.....	..	" ..	"

GENERAL PARESIS—Continued.				DEMENTIA, TERMINAL—Continued.			
		Men.	Women.			Men.	Women.
Patellar:				Reflexes—Irideal:			
Normal	.... 40	%	..	Accom'n: Normal	.. 68	%	88 %
Diminished	..	"	..	Diminished	.. 20	"	32 "
Increased	.. 60			Absent	.....		..
Absent	.....			Patellar:			
IMBECILITY.				Normal	..... 46	"	56 "
Light: Normal	.... 91	"	60 %	Diminished	.. 22	"	28 "
Diminished	.. 9	"	40 "	Increased	.... 26	"	16 "
Absent	.....		..	Absent	..... 4	"	..
Reflexes—Irideal:				GENERAL AVERAGE.			
Accom'n: Normal	100	"	80 "	(Few miscellaneous cases included.)			
Diminished	..		20 "	Light: Normal	.... 79	%	79 %
Absent	.....		..	Diminished	.. 18.5	"	19.5 "
Patellar:				Absent	..... 2.5	"	1.5 "
Normal	.... 54	"	40 "	Reflexes—Irideal:			
Diminished	.. 27	"	40 "	Accom'n: Normal	.. 77	"	84 "
Increased	.... 18	"	20 "	Diminished	.. 21.5	"	15.5 "
Absent	.....		..	Absent	..... 2.5	"	.5 "
DEMENTIA, TERMINAL.				Patellar:			
Light: Normal	.... 76	"	88 "	Normal	.... 47.5	"	48 "
Diminished	.. 22	"	12 "	Diminished	.. 25.5	"	30 "
Absent	.....		..	Increased	.... 23.5	"	19.5 "
				Absent	..... 3.5	"	2.5 "

There are several things of interest in the above numbers. The most striking is the great predominance of variations of patellar reflexes over those of the irideal (5-2). The second, the large number of cases where the patellar reflexes were increased (86 cases). And the third, which, however, is not seen from the table alone, is a very frequently found peculiar state of opposite conditions existing between the patellar reflex and that of accommodation; where this latter was diminished, the former, in a large majority of instances, was found more acute. The general truth is, that the conditions of the different reflexes very seldom correspond with each other, and that is true even as regards their irregularities.

IV. COLOR-BLINDNESS, ETC.

"The proportion of color-blind is about 5 per cent or less among men, and 2 per cent or less among women. This includes all the varieties and degrees of the defect." (Noyes: *Disease of the Eye*, p. 17.) Among the four hundred insane examined, color-blindness was found in only two men and one woman, which means, respectively, one and one-half of 1 per cent; and all these three cases were of an incomplete character.

The method of examination differed somewhat from those usual. Instead of using a skein or colored letters, solutions representing the seven rainbow colors were placed in narrow glass tubes, which were arranged in a frame of 3 x 4 inches. This method is

very simple, and I believe very efficacious. According to the inclination of the frame towards light, the tubes may be brought closer together, and where it seems necessary the light may be transmitted through the tubes and forms almost a perfect spectrum on a white paper behind, which adds to the instrument a further value. I must acknowledge the almost negative results of this examination surprised me, though even with such a number the possibility of accidents can not be excluded.

The last class of phenomena I inquired into is of a pure psychological order, and one of the most obscure; it comprises a few of purely psychical inclinations, as found in the insane patients.

It is commonly acknowledged that in every individual there is such a thing as a "nature;" a psychologist would state, every organization is slightly different from all others, and its psychical manifestations are correspondingly different; and both the layman and the scientist know that there are certain classes of these "natures." They are natural, or inborn, inclinations of faculties, and should not be mistaken for temperaments, which mean the ways of action and reaction of a being.

The inclinations of man's faculties consist mainly of (1) attraction toward an object, (2) indifference to it, or (3) aversion. Noticing these phenomena in the insane with relation to objects, both well defined and of common interest, I soon found some peculiarities that promised me that a closer and extended inquiry into the subject would not be without due compensation. I decided to choose the sciences preferred in schools—where the being is guided by the most natural, his virgin, inclinations, for it is these and not any that may have been acquired or modified by exigencies, duty or reason that are of true and prime psychological value. The investigation was conducted necessarily entirely by personal inquiry with each patient; the method pursued was to ascertain, first, if the examined had or had not a sufficient education; next, if he had sufficient, how he learned; and last, which of the various branches of learning he preferred most. Here are the results:

MANIA ACUTA—Subjects preferred in learning:				MANIA RECURRENS—Continued.			
	Men.	Women.			Men.	Women.	
Geography.	12.5 %	43 %		History.....		31 %	
History.....	..	..		Mathematics...50	%	31	"
Mathematics....12.5	"	..		None or misc....		7.5	"
None or misc...25	"	14	"	Too little school...		7.5	"
Too little school.50	"	43	"	MANIA CHRONICA:			
MANIA RECURRENS:				Geography.....15	"	14	"
Geography.....50	"	23.5	"	History.....15	"	14	"
				Mathematics...20	"	19	"

MANIA CHRONICA — Continued.

	Men.	Women.
None or misc...	34 %	33 %
Too little school.	17 " 24	" "

MELANCHOLIA ACUTA:

Geography	7 " 18	" "
History	21.5 " 50	" "
Mathematics...	35.5 " 18	" "
None or misc...	14 " 12	" "
Too little school.	21.5 " 6	" "

MELANCHOLIA CHRONICA:

Geography	6 " 26	" "
History	6 " 26	" "
Mathematics...	23 " ..	" "
None or misc...	41 " 26	" "
Too little school.	23 " 20	" "

PARANOIA:

Geography	25 " 16	" "
History	10 " 31	" "
Mathematics...	35 " 7	" "
None or misc...	25 " 31	" "
Too little school.	5 " 13	" "

EPILEPTIC INSANITY:

Geography .....	..	" "
History .....	..	" "
Mathematics...	61 " 14	" "
None or misc...	22 " 57.5	" "

EPILEPTIC INSANITY — Continued.

	Men.	Women.
Too little school.	17 %	28.5 %

IMBECILITY:

Geography.....	27 " ..	" "
History.....	..	10 " "
Mathematics...	18 " 35	" "
None or misc...	45 " 55	" "
Too little school.	9 " ..	" "

GENERAL PARESIS:

Geography... ..	..	" "
History.....	..	" "
Mathematics...	80 " ..	" "
None or misc....	..	" "
Too little school	20 " ..	" "

TERMINAL DEMENTIA:

Geography.....	12 " 8	" "
Mathematics...	10 " 8	" "
History.....	22 " 4	" "
None or misc....	44 " 60	" "
Too little school.	12 " 20	" "

GENERAL AVERAGE:

Geography.....	13.5 " 14.5	" "
History.....	9.5 " 22.5	" "
Mathematics...	28.5 " 17.5	" "
None or misc...	32.5 " 27.5	" "
Too little school.	16 " 17	" "

Several very apparent deductions can be drawn from the tables:

History (and abstract sciences) is much more favored by women, and especially by the female melancholiac and paranoiac. Mathematics forms almost an exclusive preference with the epileptics and in general paresis. Most indifferent and illiterate are among the terminal dementes.

Strong musical inclination is very prevalent (23 per cent) among female and slightly less among the male paranoiacs; but many of these insane soon lose the best of their qualities of composing, playing, and singing.

Artistic tendency is very pronounced, and almost general, in several species of insanity (viz., Lombroso, *Genie*, p. 284); it is common with paranoiacs. I have several pictures made by paranoiacs, and that in some instances almost untrained ones, that are worth looking at, at least; and the local journal of the Middletown State Hospital bears many a trace of "insane" inspiration that is worth a perusal. I regret the extent of my article prohibits me from introducing a few examples, and speaking of this interesting subject more in detail. * * * *

I conclude: I have tried to do my work sincerely; may it be thus accepted. And I extend herewith my thanks and gratitude to the authorities of the Middletown State Hospital for the Insane, by whose courtesy I have been enabled to make these investigations.

A REVIEW OF THE SIGNS OF DEGENERATION AND OF METHODS OF REGISTRATION.*

BY ADOLF MEYER, M. D.,

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Grown up in the Darwinian movement, we can hardly realize the primitive meaning of the general expression degeneration, as used by the writers who first introduced it. *Morel* speaks of the existence of a primitive perfect type of the human race; he calls it the master work and sum of the creation; as such, "it has received the threefold sanction of revelation, of philosophy, and of natural history." Degeneration is for him a pathological deviation from this biblical primitive type, a degradation of the progeny. While the physiological deviations are due to the influence of the climate, the nourishment, and the habits of life, the pathological deviation or degeneration is due to exaggerations and abnormalities of these influences: Intoxications, bad social surroundings and unhygienic conditions, diseases, moral defects, congenital or early acquired influences, heredity. *Morel's* studies on the very pronounced forms of degeneration in idiots, in cretins, etc., were subsequently extended more minutely to the insane, the criminals, and, since the importance of heredity in nervous affections has been more noted, to the "neuropathic family." At first the term merely comprehended the most obvious types of defectiveness. *Lombroso*, with his numerous followers in criminal and pathological anthropology, *Benedikt*, in his studies on the brain of criminals, and numerous writers on allied subjects, gradually extended the scope of their investigation and accumulated a great amount of interesting material. One of the chief features of this progress lies in the change of the philosophical position prevailing in our epoch. The originally perfect man has been swept away by the doctrine of evolution. Comparative anatomy, morphology, and ethnology have opened a great field for speculation in a new direction. The perfect man of the new school is he who is as free as possible from the character-

* The following notes were originally prepared for, and read as, the opening of a discussion of the "Study of Degeneration," at the meeting of the Association of Assistant Physicians of Hospitals for the Insane. As the desirability of studies in this line appealed to a majority of the association, the methods were taken as a starting basis for coöperative work, to be modified in subsequent meetings.

istic features of phylogenetically less mature types. Everything that reminded strongly of possible ancestors of a lower degree was stamped with the term atavism. The ardent search revealed indeed a great number of such features in the so-called defective elements of the human race, and the creation of the types of degeneration—the criminal, the neurotic, the imbecile, the insane, etc.—has, perhaps, been based too much on the “atavistic” features. The good influence of the general principles of evolution is quite evident; but just as in much of the evolutionary literature, we find often that the existence of similarity with less mature types satisfied the minds that the features were “degenerative,” and an investigation of the physiological reasons for the existence of the forms was dispensed with.

This movement could not help calling forth strong protest, and we may say that we stand at present in a wave of reaction. Quite a number of sober naturalists and anthropologists assume a non-committal position and approach the problem from a point of view similar to this: The so-called normal type is an arbitrary assumption and embraces a great number of physiological variations. It remains to be seen whether certain variations of form or function by themselves or in groups constitute actual signs of degeneration; *i. e.*, whether they are signs of constitutional inferiority, with a tendency to become more marked in the offspring. That there are such signs of degeneration, nobody would deny to-day; but their relative importance and the laws of their formation require a broader investigation. The number of observations is relatively so small that it is hardly ripe for general conclusions.

The practical value of our *present* knowledge of the signs of degeneration is perhaps overrated by those who believe they have found a scientific phrenology. Probably for a long time to come the study of the mental capacity and potentiality will be best carried out by studying the psychical manifestations rather than the physical forms of a person. The objection is raised that the study of the so-called signs of degeneration is not even of practical importance for the alienist. This is only true to some extent. Criminologists make use of the signs of degeneration in court. The physician must form an opinion of his own on the question if he will do justice as an expert. Or shall he simply repeat the conclusions drawn by others, on a very limited material? Why not unite for a broad, uniform investigation? Another problem is bound to become more and more important: the question of mar-

riage in those afflicted with signs of degeneration. The questions will arise: How far are the stigmata constitutional? How far do these localized brand-marks of the sins—unconscious or conscious—of the parents affect the entire personality? Which are the chief provoking agencies in their formation? Why do we find families with stigmata of degeneration going from bad to worse, and others grow up again and develop healthy and prospering children?

Let us admit that these questions touch problems which, to-day, are purely theoretical. Why? Because we do not know enough yet of the facts that underlie the acknowledged influence of heredity and the laws of growth and development.

That the alienist, who is every day confronted with the enigma of hereditary degeneration, will feel as deep an interest in the matter as any one, is evident. But he is also the one who, next to the criminologist, needs the most warning against premature conclusions.

For statistical purposes, for the mere study of frequency, our hospitals offer unique chances. But the great mixture of nationalities, with their strongly varying "normal" types, the great variety of diseases, the difficulty in ascertaining the history of the family and of the patient, make a great number of precautions necessary. The ideal method of procedure would be to examine whole families of one nationality, of the same locality, and the same conditions of life; to compare them with branches of the families which live in different climates and conditions; to study the results of intermarriage, etc. Even if the chances for such work could be obtained it would be difficult enough to elucidate the causes of variations.

Our chances are not as favorable, but none the less worth our attention. If we make it a rule to look over our new patients at the physical examinations, and to use systematic methods of registration of whatever we find time to examine closely; if we further try to see the relatives; if we watch whether a person with signs of degeneration develops features of insanity different from those who have no stigmata in themselves or in their family; if we are able to gather a vast array of carefully, conscientiously collected data, even on a limited number of factors only—if we have done all this, we have done ourselves and the patients and those after us our best service. We must not try to do too much at once, but be sure that we can carry out our plan within the domain that each of us may choose.

In order not to rely only on our own observation, and in order to sum up our work, we must agree on definite methods, and for this

purpose the following notes are offered as a suggestion. A test by many will soon sift the unpracticable ones, and experience of a whole body of workers will establish a mutual ground.

Before entering upon the methods, we shall shortly review the classes of disorders to which the authors have drawn our attention:

A. *Morphological deviations from the normal.*

I. Deviations of the general proportions of the body. The hands and arms, the feet and the legs, the trunk, the neck, the head (as a whole) and its various parts (skull, face, jaws, mouth, nose, etc.) may be too small or too large in proportion to the rest of the body.

II. Asymmetries of skull, face, and rest of the body.

III. Peculiar forms of special parts—skull (especially forehead and occiput), face (jaws, teeth, palate, lips, nose, ears, eyes), teratological peculiarities generally.

B. *Functional deviations from the normal.*

I. Abnormal innervation of one side, or of special muscles, or of vasomotor nerves.

II. Developmental irregularities—in dentition, learning to walk and to speak; enuresis nocturna, inclination to epileptic and other nervous attacks, etc. Lack of congruity between age and appearance.

C. *Purely psychological stigmata.*

Abnormality of sensory perceptions (especially the pain sense); abnormalities of habits, of ideation, of action (sexual life, emotional attitude, egotism, disequilibrium, imperative ideas, mental “tics,” associated movements, explosive activity, periodicity, etc.).

For the latter group the book of Dr. J. L. A. Koch on “Die psychopathischen Minderwertigkeiten,” and the one of Cullerre on the “Borderland of Insanity,” offer a great number of instances.

In a general way, the examination of each case should extend over the principal features which determine the general anthropometric make-up of the individual, even if only a part is examined completely (for instance, the ear). An ear may be large in a small woman, small in a large man, etc. The following data should be given in every case:

No.; name,; relation of No.,; sex,; age,; place of birth,; nationality,; religion,; occupation,; weight,; height,; color of hair,; of iris

For the general relations of the body the following measurements were primarily chosen for use in the autopsies at the Kankakee Hospital:

Weight.
 Height of vortex.
 Height of vertebra prominens.
 Height of perineum.
 Height of spina ossis ilei — right; left.
 Height of knee — right; left.
 Height of tip of middle finger — right; left.
 Height of acromion — right; left.
 Length of acromion — elbow — right; left.
 Length of acromion — tip of middle finger — right; left.
 Girth of neck.
 Girth of chest.
 Girth of waist.
 Girth of hips.
 Girth of wrist — right; left.
 Girth of arm — right; left.
 Girth of forearm — right; left.
 Girth of thigh — right; left.
 Girth of knee — right; left.
 Girth of calf — right; left.
 Girth of ankle — right; left.
 Length of foot — right; left.
 Breadth of shoulders.
 Breadth of hips.

To these measurements should be added in the living:

Circumference of chest at deepest inspiration.
 Circumference of chest at deepest expiration.
 Capacity of lung (spirometer).
 Strength of squeeze — right; left.

The points from which the measurements are taken are those described by Dr. E. Schmidt.*

For the elbow-joint we take the point between the humerus and the capitulum radii; for the knee-joint, the articulation is easily felt just outside of the patella or inside of it. The girth of the chest is taken over the middle of the sternum, just under the axilla; the girth of the waist in the middle between margin of ribs and crista ossis ilei; the girth of the hips below the crista. The girth of the wrists and of the ankles is taken as a means of comparison between size of the skeleton and of the soft parts, as given

* Anthropologische Methoden, von Dr. Emil Schmidt. Leipzig, 1888: Veit & Co.

by the measurements of the arm and calf; it is therefore taken at the thinnest points, not around the epiphyses of the bones, but a little above them. The girth of the thigh is taken just below the gluteal fold.

Completer anthropometric blanks are used in many prisons and reformatories (see the report of the Elmira Reformatory). The above list of measurements appeals to me because it reveals asymmetries, atrophies, etc., sufficiently without being too long.

For the measurements of the head, Peterson* gives eleven measurements, with a full description of the method. In the autopsies at Kankakee I chose nine, one of which, the bi-temporal diameter, should be replaced by the binauricular diameter. The list is now:

- Diameter naso-occipitalis.
- Diameter biparietalis.
- Diameter binauricularis.
- Diameter mento-occipitalis.
- Diameter zygomaticus.
- Diameter of lower jaw (gonia).
- Facial length.
- Circumference of head.
- Sagittal line.

On the whole, the points from which the measurements were taken coincided with those that form the starting point of Rieger's system of craniography. The facial length is taken from a point which lies in the connecting line of the two upper orbital margins to the chin. The upper end of this line is about five mm. above the actual root of the nose, which is sometimes a rather indistinct point.

For the study of facial asymmetries the following oblique measures should be taken:

Distance from the external angle of the eye to the angle of mouth—right; left.

Distance from tragus to chin—right; left.

Distance from tragus to root of nose—right; left.

Distance from tragus to tip of nose—right; left.

Distance from tragus to external angle of eye—right; left.

These measures, supplemented by a photograph profile view and one front view, will answer all the purposes, with the exception of the study of asymmetry of the skull, for which Peterson also

*"Craniometry and Cephalometry in Relation to Idiocy and Imbecility," by Frederick Peterson, M. D., *AMERICAN JOURNAL OF INSANITY*, Vol. 52, pp. 73-89.

recommends taking curves, either with a lead strip or lead wire, or with the instrument of Luys.

A great improvement on the separate measurement of the diameters and the circumferences is the method of craniography of Rieger.

The principal feature of Rieger's craniography is the registration of curves, of outlines instead of mere distances; further, the use of the so-called millimeter paper, which allows one to dispense altogether with the endless series of numbers. The plane of the fundamental curve corresponds approximately to the basis of the hemispheres and is easily ascertained; all the other transverse and longitudinal curves of the convexity are erected on it.



FIG. 1.

Rieger proceeds as follows: Two threads are tied together so as to form a cross. The ends are made heavy by attaching small weights of lead. The node of the cross is put on the vertex, in the median line; the anterior line goes along the dorsum of the nose, the posterior one through the middle of the nuchal groove; the lateral lines are conveniently put so that they pass over the anterior wall of the external auditory meatus. The fundamental circular curve, indicated by a rubber ring, is fixed by an anterior and a posterior point. The anterior point is chosen where a prolongation of the dorsum of the nose would cut the connecting line between the two upper orbital margins. The posterior point is given by the external occipital protuberance, or where it is not felt by the

median point of the upper margin of the nuchal muscles. The rubber ring is so adjusted as to form a perfectly even horizontal plane. (Fig. 1.)

A square piece of millimeter paper is prepared, of about thirty cm. side. It is conveniently numbered, as Rieger's Fig. 15 shows, not from the real center, but from a point about two fields to the right of, and below, the center of the chart. This point forms the zero point of the graphic system of the two axes.

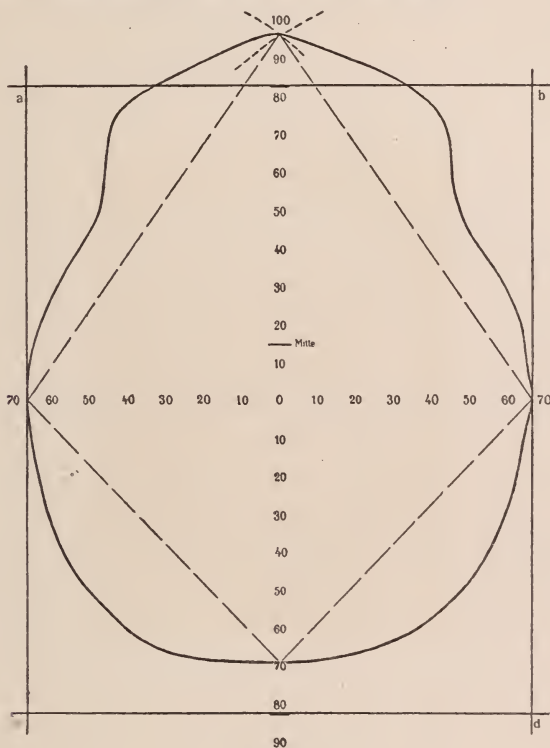


FIG. 2.

In order to obtain the fixed points of the rubber ring, the transverse diameter between the two lateral points is first measured. The distance is registered on the transverse axis of the paper, one-half of the distance to the left, the other half to the right, of the zero point.

The anterior point is obtained with a compass or caliper, one arm of which is armed with a pencil. We measure first the distance from the left lateral point and register it on the paper as a circle;

able to take one or more horizontal curves above the insertion of the temporal muscle. These planes must be perfectly parallel with the fundamental curve. A second rubber ring is applied; the measurements and curves are registered in identically the same manner as those of the first plane. Rieger marks this upper curve in blue color. If this blue curve is not larger than the red one, the head is more or less microcephalic.

The next curve is that of the median sagittal line. It would be too large to be obtained accurately at one time. It is therefore conveniently taken in two pieces, divided by the node of the cross. This node is ascertained by taking its distance from the four fundamental points with the compass or caliper (Fig. 3). The curve is drawn (in red) to the left from the median line, and does not interfere with the other lines of the drawing. If a depression should be taken, one or more parallel curves may be ascertained after the same plan. The chief condition is that the fixed points be first accurately registered, and that the lead wire be accurately applied and the curve tested before it is drawn with the pencil.

The transverse curves are to be taken in planes which are exactly perpendicular on the fundamental plane. If this rule is not observed caricatures may be the result, and artificial asymmetries will occur. The cross of thread may be, but usually is not, in this perpendicular plane. Fig. 3 shows that the point of intersection *k* is a certain distance in front of the transverse line, which goes through the zero point and the two lateral fixed points of the cross; our curve must therefore be taken through that point of the sagittal line which lies just that distance behind the point of intersection. For planes anterior or posterior to the cross of threads the corresponding point of the sagittal line is also found with the help of the drawing ($x' l' h'$ and $x'' l'' h''$). But, even if we know the correct point of the sagittal line, we must be careful to take the lateral halves of the curves exactly in the vertical plane, and not to choose the shortest way simply. In order to be quite sure, I should suggest a little brass instrument of T shape; the sagittal line is put on the median line; the cross branches must be of sufficiently firm material to keep the right angle when bent; *i. e.*, it must not be readily twisted. Rieger enters the curves in green color, and forward.

To the comfort of the reader, I may say that the execution of the craniographic method is much easier than the study of a condensed description, and that it requires little practice to read from the

drawing a mental reconstruction of the skull, with all its curves. At the same time all the measurements are registered without the burdensome array of figures, and any number of measurements can be read from the sketch, while the examination after the old method is unsatisfactory and inaccurate for the study of asymmetries, and, if the patient is gone, does not allow of any additional investigation.

This abstract of part of Rieger's paper* can not replace the original, which is herewith highly recommended as a very suggestive guide, and an argument in favor of accuracy. Even those who have not the time to take all the measurements do well to register the few they take after Rieger's plan.

A few words may be said here with regard to the deformities which may be met:

Virchow has given a very complete classification of the malformations of the skull, based largely on the observation that premature synostosis of a suture produces shortness of the diameter perpendicular on the direction of the obliterated suture; the bone stops growing prematurely where the synostosis has occurred, whereas the not affected borders continue growing. Virchow's classification is as follows:

1. Simple *macrocephalus*:

A. Hydrocephalus.

B. Kephalones (without hydrocephalus).

2. Simple *microcephalus* (nannocephalus).

3. *Dolichocephalus*:

A. Upper middle synostosis:

Simple dolichocephalus (synostosis of sagittal suture).

Sphenocephalus (synostosis of sagittal suture and compensatory growth in the region of the large fontanel).

B. Inferior lateral synostosis:

Leptocephalus (synostosis of frontal and sphenoid bones).

Klinocephalus (synostosis of the parietal or sphenoid bones).

4. *Brachycephalus*:

A. Posterior synostosis:

Pachycephalus (synostosis of parietal bones with the occipital bone).

* Eine exacte Methode der Craniographie von Dr. C. Rieger, Würzburg. Jena, Gustav Fischer, 1885; §1.15.

Oxycephalus (synostosis of parietal bones with the occipital and temporal bones, with compensatory growth of the region of the anterior fontanel)—acrocephalus.

B. Upper anterior and lateral synostosis:

Platycephalus or chæmocephalus (extensive synostosis of frontal and parietal bones).

Trochocephalus (partial synostosis of frontal and parietal bones in the middle of the half of the coronal suture).

Plagiocephalus (unilateral synostosis of frontal and parietal bones).

C. Inferior median synostosis:

Simple brachycephalus (early synostosis of the basal and sphenoid bones).

Drawings of several of these extreme and well characterized types can be found in the paper of Dr. Peterson and in the "Reference Hand-Book for the Medical Sciences" (Frank Baker, the "Joints of the Skull," Vol. VI, p. 462). Dr. Peterson also mentions the scaphocephalus and trigonocephalus.

The following general features have been especially mentioned in connection with the insane:

1. Crania progenæa (L. Meyer), defective development of the posterior parts of the skull, breadth of the parietal and temporal bones, and projection of the maxilla.

2. Plagiocephalus.

3. Flat occiput (often due to rickets).

4. Low, sloping forehead.

Attention has also been drawn to deformities of the thorax (see the paper of Dr. Neff). Whereas the emphysematous, the paralytic, and the rachitic thorax has largely clinical interest, the skoliotic and kyphoscoliolic thorax may depend on a congenital weakness of the muscles of one side or on an acquired weakness, as in syringomyelia, etc. A peculiar retraction of the lower end of the sternum, called trichterbrust (funnel-breast), has been described as a sign of degeneration; the pectus carinatum, or pigeon-breast, might be called the reverse, and is also mentioned.

A very excellent system of dynamometric measurements for most muscles has been invented by Dr. Kellogg. As it belongs more into the field of clinical work and treatment than into that of the study of degeneration, we simply mention it here. It is of

great practical value, and will help to introduce rational gymnastics.*

The Face.—While the facial angle is not so frequently mentioned in recent literature, various parts of the face have been the subject of much investigation regarding the signs of degeneration. The face and its expression are indeed the chief guides in daily life in judging people by their appearance.

General asymmetries of the face are already included in the measurements given above. There remains the study of the special parts. The eyes have not, so far, been much subjected to the study of degeneration. Whether any one of the five types of Metschnikow is prevailing can not be said. We find mentioned:

1. Congenital coloboma of the iris, which is so rare that it belongs among the monstrosities, and is of little importance among the insane.

2. Ptosis, congenital.

3. Asymmetrical coloration of the iris, in toto or in part.

4. Oval or eccentric pupil.

As functional stigmata nystagmus and strabismus are mentioned.

On the *nose* we have not been able to find any data. The types of noses given by Topinard (*Anthropologie*) might form a basis for a study.

The *jaws* have attracted far more interest. Since Dr. Boody gives an excellent review of work done on this subject, I can limit myself to very short remarks. Most attention, so far, has been devoted to the upper jaw and palate; little has been done on the lower jaw, and even on irregularities of dentition. Dr. Channing, who has a collection of over 1,000 casts of palates of idiots, had the casts made in a systematic way and measured the casts, a plan which deserves imitation. If possible, a cast of both the upper and the lower jaw should be made, and the relation in the position of the two must be ascertained. The dentists of the institutions will be able to demonstrate the methods; the measurements can be made later.

The typical stigmata are:

1. Prognathia, a projection of the mandibula. This point played an important rôle in the Prendergast trial, where the prosecuting attorney was pleased to formulate his question to the witnesses as follows: "Do you believe in the jaw-theory of insanity?"

* Kellogg, J. H., "A New Dynamometer for Use in Anthropometry," and various other papers. Battle Creek, Mich., 1893.

2. Irregularity in dentition; persistence of milk-teeth (especially of an eye-tooth).

Irregularities of the position of the teeth.

Irregularities of the shape of the teeth.

3. The abnormal configuration of the palate.

a. The margin (alveolar circle) may be too wide, too narrow, pointed (V-shaped), saddle-shaped, asymmetrical.

b. The vault of the palate may be abnormally high, asymmetrical, etc.

c. There may be a longitudinal torus or ridge in the median line.

d. Cleft palate, hare-lip, etc.

Further, we find data on the thickness of the lips; especially thickness of the lower lip, is to this day called a sign of sensuality.

The ear has furnished the greatest number of types of degeneration, as the notes of Morel and the papers of Binder,* Gradenigo,† Váli,‡ Frigerio,§ and Petrona Eyle|| will show.

G. Schwalbe,¶ the anatomist of Strassburg, has given the subject the broadest study, and it will certainly be advisable in future study to follow his outline, which is based on the principles of Bertillon's Identification Anthropométrique (Melun, 1893).

Binder gives in his monograph the following analysis of Morel's ear (the ear of the degenerate):

1. Anomalies in the configuration of the ear as a whole:

a. The variations in size.

b. The implantation.

c. Abnormalities in the general configuration.

d. Inequality of the two ears.

2. Anomalies in the architecture and form of the parts composing the ear:

*Binder, Das Morel'sche Ohr, Arch. f. Psych., Vol. XX, 1889, p. 514 ff.

†Gradenigo, Zur Morphologie der Ohrmuschel bei gesunden und geisteskranken Menschen und Delinquenten. Archiv für Ohrenheilkunde, XXX, 1890.

—, Über die Formanomalien der Ohrmuschel. Ibid. Vol. XXXII and XXXIII, 1891.

—, Centralblatt für d. medic. Wissenschaften, 1888.

‡Váli, Allg. Wiener Medic. Zeitung, Nov. 11, 1891.

§L'oreille externe, Archives de l'anthropologie criminelle, 1888.

||Petrona Eyle, Über Bildungsanomalien der Ohrmuschel. Zürich, 1891.

¶Schwalbe, Das Darwin'sche Spitzohr beim menschlichen Embryo. Anat. Anz., 1889.

—, In wie fern ist die Ohrmuschel ein rudimentäres Organ? Archiv. f. Anat. und Phys. Anat. Anz., 1889. Supplement.

—, Beiträge zur Anthropologie des Ohres. Internationale Beiträge zur wissenschaftlichen Medicin; Festschrift für R. Virchow. Bd. I, 1891.

—, Zur Methodik statistischer Untersuchungen über die Ohrformen von Geisteskranken und Verbrechern. Arch. f. Psych., Vol. XXVII, p. 633.

a. The lobule may be excessively long or adherent, or absent. Coloboma, lobuli. Hypertrichosis.

b. Anomalies of the helix.

c. Anomalies of the anthelix.

d. Anomalies of the crura furcata and fossa ovalis.

e. Anomalies of the tragus and anti-tragus.

f. Anomalies of the concha and fossa cymbae.

g. Anomalies of the fossa scaphoidea.

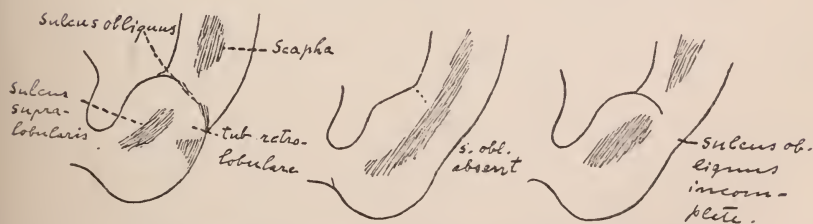
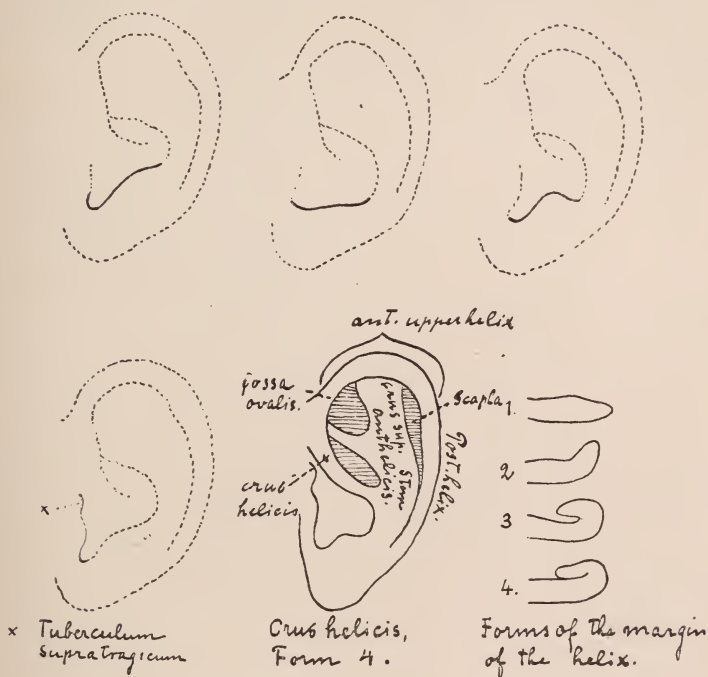
From the analysis of these points he arrives at the following types of ears:

1. The defectively implanted ears.
2. Excessively large ears.
3. Excessively small ears.
4. The excessively folded ear.
5. The irregularly shaped ear (especially the ear with abnormally small upper portion).
6. Ears varying in breadth.
7. *Blainville's* ears (asymmetry of the two ears).
8. Ear without lobule.
9. Ear with adherent lobule.
10. *Stahl's* ear (1). The helix is very broad in the transverse portion and partly covering the fossa ovalis. The lower part of the helix is absent.
11. *Darwin's* ear (with marked tubercle at the beginning of the descending part of the helix).
12. *Wildermuth's* ear; anthelix prominent.
13. The ear without anthelix and crura furcata.
14. *Stahl's* ear (2). Wide bifurcation of crura; multiple bifurcation, especially of the upper crus.
15. *Wildermuth's* Aztek's ear. Lobule absent. The upper crus of the anthelix goes over into the flat helix without any demarkation; the lower crus is very deep and apparently absent, the upper crus thus forming the margin of the concha.
16. *Stahl's* ear (3). Only the crus antierius present; the crus superius merely a node of cartilage. The concha apparently divided by an additional process starting from the anti-tragus.
17. The ear with double helix, the crus superius not even indicated; rare.
18. Concha too large or too small.
19. The ear with a scaphoid fossa extending into the lobule.

20. *Morel's ear*; flat and broad in the upper parts. Crus superius, broad, flat; scapha, broad, shallow.

21. Malformations of cartilage excluding the one caused by othæmatoma.

Antitragus.



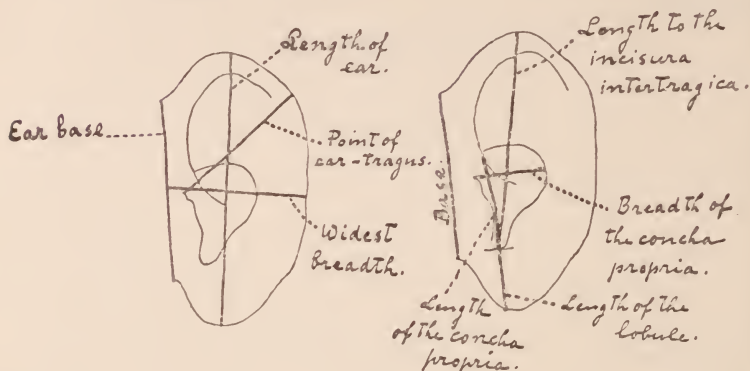
Nomenclature and Types of The lobule.

22. Atypical malformations, coloboma, etc.

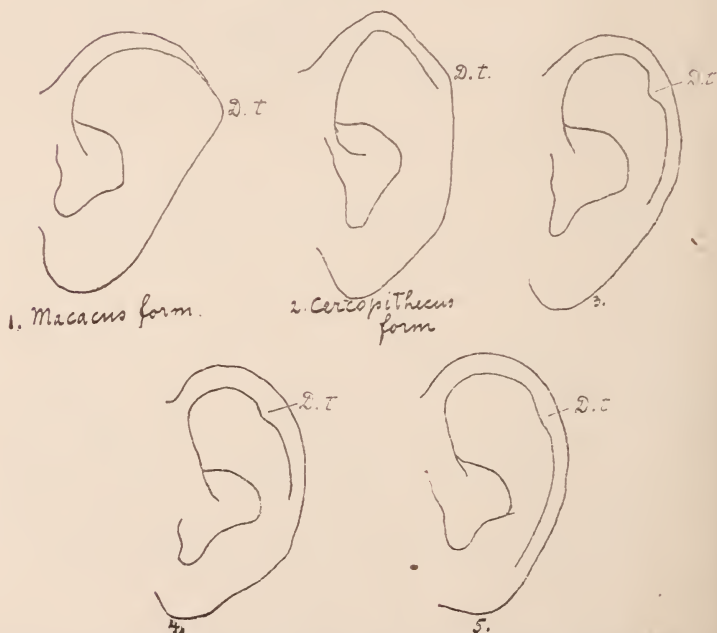
An attempt at using this tabulation shows at once the difficulty in placing transition forms. The use of arbitrary types has, there-

fore, been replaced by Schwalbe by an analysis of the parts of the ear. His chart contains thirty-four questions on each ear, perhaps

Measurements:



Darwin's Tubercle:



a great number at first sight, but not over-accurate for him who tries to follow it for some time. The drawings made after those

CHART FOR RECORDING DATA AS TO EAR, ETC.

No.		Name.		Disease.		Nationality.		Birthplace.		Heredity.		Other signs of degeneration.			
Sex.	Religion	Occupation	Age	Height.	Color of Hair.	Color of Iris.	Length-breadth of Head.	Index	Physiognomic Index.	Ear-Index.	Morphological Ear-Index.				
Greatest length of head.....							R. L.		LOBULUS AURICULÆ. Attachment prolonged on the cheek, 1; simply adherent, 2; partly separated, 3; free, 4).....					R. L.	
Greatest breadth of head.....							R. L.		Sulcus supralobularis (absent, 1; medium, 2; marked, 3; connected with scapha, 4).....						
Greatest length of entire ear.....							R. L.		Sulcus obliquus (absent, 1; only in antitragus region, 2; complete, 3). Tuberculum retrolobulare (absent, 1; medium, 2; marked, 3).....						
Greatest breadth of entire ear.....							R. L.		Sulcus lobuli verticalis (absent, 1; medium, 2; marked, 3).....						
Length of ear base.....							R. L.		Direction of lobule (bent inward, 1; straight, 2; bent outward, 3).....						
Length of concha propria.....							R. L.		Lobule split (split, 1; not split, 0).....						
Breadth of concha propria.....							R. L.		Position of ear (closely attached, 1; medium, 2; almost at right-angle, 3).....						
Distance of upper end (Darwin's tubercle) to upper margin of tragus.....							R. L.		General form of the ear.....						
Length to incisura intertragica.....							R. L.		Insertion of ear (straight, angle less than 112° 1; oblique, angle more than 112°, 2).....						
Length of lobule.....							R. L.		Auricular appendices.....						
<p>HELIX.</p> <p>Darwin's tubercle (Macacus, 1; cer-copithecus, 2; reverted pointed, 3; reverted rounded, 4; indicated, 5; absent, 6).....</p>							R. L.		<p>ANTHELIX.</p> <p>Stem of the anthelix (retracted, 1; in the level of the ear, 2; prominent, 3).....</p> <p>Crus anthelicis superius (absent, 1; indicated, 2; medium, 3; strongly developed, 4).....</p> <p>Crus anthelicis tertium (present, 1; absent, 0).....</p> <p>Other accessory crura anthelicis (describ., if present; absent, 0).....</p>						
<p>ANTITRAGUS.</p> <p>Direction of upper margin (horizontal, 1; medium, 2; oblique, 3).....</p> <p>Inclination outward (absent, 1; medium, 2; pronounced, 3).....</p> <p>Form (straight, 1; slightly arched, 2; with marked prominence, 3).....</p>							R. L.		<p>ANTITRAGUS.</p> <p>Direction of upper margin (horizontal, 1; medium, 2; oblique, 3).....</p> <p>Inclination outward (absent, 1; medium, 2; pronounced, 3).....</p> <p>Form (straight, 1; slightly arched, 2; with marked prominence, 3).....</p>						
<p>SALTYR POINT (present, 1; absent, 2).....</p> <p>CRUS HELICIS (weak, 1; medium, 2; marked, 3; connected with anthelix [see figure] 4).....</p>							R. L.		<p>FISTULA AURIS CONGENITA.....</p> <p>ANOMALIES OF TEETH.....</p>						

published in his paper in the *Archiv. für Psychiatrie*, and a few explanations, will help the beginner.

The head-index is obtained by dividing the greatest breadth by the greatest length and by multiplying the result by 100.

The physiognomic ear-index is 100 times the quotient of breadth by length.

The morphological ear-index is 100 times the quotient of the base and the distance between the tragus and the point of the ear (Darwin's tubercle).

The various types of Darwin's tubercle, which corresponds to the point of the ear in animals, are represented in the drawings.

The satyrpoint is not often present; it forms what the layman might call the point of the human ear, similar to what is seen in the drawing of the cercopithecus form.

For the position of the ear to the skull, or more especially the mastoid process, Schwalbe does not require the measurement of the exact angle. The angle of 112 degrees, which forms the limit between straight and oblique insertion of the ear, is obtained by the position of the line of greatest length of the ear, and a line which passes through the lower orbital margin and the upper margin of the external meatus.

Next we have to consider the whole group of malformations:

Nævi and pigment-spots of the skin, abnormal growth of hair, vitiligo, patches of gray hair, club-foot, polydactyly, defective extension of the end-phalanges of the little finger, congenital luxations, narrow pelvis, tail-position of coccyx, gynæcomastia (development of breasts in the male); further, the whole array of malformations of the sexual organs — phimosis, epispadias, hypospadias, cryptorchism, abnormal smallness of testicles, azoöspemia, aspermia, infantile uterus, atresia of vagina, partial or total redoublication of the vaginal and uterine canal, etc.

Little may be said on the functional deviations (strabismus, nystagmus, unequal innervation of the two sides of the face, tics, etc.). For the developmental irregularities the books of Emminghaus ("Psychosen des Kindesalters") and of Moreau ("La folie chez les enfants"), and also a few publications in the Transactions of the Illinois Child Study Association (published by the Werner Company, in Chicago), will form a first guide. As to the psychical deviations, we should strongly advise the perusal of the books of Koch and Cullerre mentioned above.

It is evident that one of the first conditions of work is excellency

of the tools, of the measuring and recording instruments. Those used by myself were contained in the anthropometric set of Virchow, made by Thamm, in Berlin. They can easily be imported by Eimer & Amend, in New York, or obtained directly from the maker. For other instruments the paper of Dr. Boody will give instructions, and those used in the military departments of this country are described in the article of Albert L. Gihon, on "Physical Measurements," in the "Reference Hand-Book of the Medical Sciences," Vol. V., pp. 667-673. The best guides will further be the little work of Schmidt, quoted above, the anthropology of Topinard and of Ranke.

For American literature, and also on account of several valuable papers on the principles in working out the results, a reprint of "Papers on Anthropometry" will be of use, from the publications of the American Statistical Association, by the American Statistical Association, Boston. (Price, 50 cents.) It contains a very useful list of literature. We also refer to the article "Head," in Hack Tuke's Dictionary of Psychological Medicine.

THE ADVANCEMENT OF PSYCHIATRY IN AMERICA.*

BY EDWARD COWLES, M. D.,
McLean Hospital, Waverley, Mass.

"The foolish man built his house upon the sand; and the rain descended, and the floods came, and the winds blew and beat upon that house; and it fell."

When we build our houses we try first to lay a firm foundation, and then to raise a good superstructure. After the house is built it must rest for its existence upon a deeper fact to sustain and maintain it. The material house is a perishable thing; the underlying purpose that upholds it and keeps it lasts from generation to generation.

The State builds its hospitals for the sick in like manner, if it builds them well. There must be the material structures before the sick can be sheltered in them. Then, whether or not they are real hospitals rests upon the understanding of the people who maintain and administer them. If personal and "political" interests creep into this essential foundation then it becomes loosened and unstable, and the hospital no longer stands for what it pretends to be. The purity of its purpose and its sacredness to humanity are prostituted; it becomes a scandal to the great cause it was built to aid. The execrations of all honest men should fall upon those who work such evils. They are of the tribe of those who were driven from the temple. It is of such that it is written: "They robbed the helpless of their bread; they stole medicine from the sick." We all join with those who pray that the waters of righteousness may descend, and come to search out the weak, and shift, and unfaithful places in such foundations, and that the wrathful winds of heaven may beat upon such houses.

The advancement of psychiatry in this country is the business of our lives. It is a business so great in importance that it includes the study and use of all things that make for the prevention and cure of insanity, and the best cure of the hopelessly insane. We need to know not only the diseases of the nervous system, but all the diseases of the mind and body, for they contribute to insanity. It is a business that sets our faces to the future; but when we look upon our great task, our first thought must be of the foundations

*Presidential address to the American Medico-Psychological Association, Denver, Colo., June 11, 1895.

upon which we have to build; how shall we add to or uphold the well-wrought results of those who have gone before? The human and the material elements, both good and bad, in these foundations upon which we have to carry on our work, have their instructive history. There are landmarks in our field of labor that, though ancient, can not wisely be removed.

In the limited time at my disposal I can do little more than to examine our foundations, to see if they were laid firmly, and built upon soundly, by the honest and wise workmen among our fathers. When it is said that their work has come to naught, by other well-intentioned men, this is a serious and harmful charge.

In my discussion of the advancement of psychiatry in America the considerations that present themselves in the way I have indicated appear to fall into three divisions: (1) Our hospitals and their management; (2) the relation of psychiatry to general medicine; and (3) the promotion of progress in the hospital treatment of insanity.

I. OUR HOSPITALS AND THEIR MANAGEMENT.

It would be a waste of time to discuss further here the foundations of public hospitals in legislation, and the evils wrought by "practical politics," in debasing institutions for the care of the sick. So long as there are, among legislators, those who say to one another for personal gain, "If you will vote for my measure I will vote for yours," and thus trade on the interests of the sick and suffering, so long will their cause suffer. Every such man never hears the sayings of the truth, or, hearing, "doeth them not." For us, we must, each in his own place, do the best we can for humanity's sake.

Our hospitals themselves are the outcome of the evolution of hospital construction, with gradual adaptation to their special purposes. Our fathers built their hospitals, both general and special, as well as they knew; they were bound, in the construction of all hospitals, until the middle of the century, by the lingering influences of the monastic period. Even the lessons of the great wars that came later have not served to prevent the building of some of the most recent and costly hospitals for general diseases in defiance of the best proven principles. It is fair to say that experienced medical counsel seems to have had little influence in these constructions.

Hospitals for the insane have followed the law of evolution. The development of the segregate plan of arranging buildings has had a steadier and more normal growth; there has been no wave

of extreme change and a tendency to relapse, as in the case of the general hospitals. The block plan of the earlier ones for the insane, in this country, was greatly improved upon by the gradual change to the semi-detached pavilion plan, which was Kirkbride's great contribution to his time. The climax of its use was reached about 1860-'70. In the balancing of indications experience seemed till then to teach the greater and proper economy of rather closely connected buildings. The lessons of the Civil War were practically and wholesomely applied in the introduction of the detached plan. Its economy has been proven, by use, to legislators whose obligations are rightly to be reckoned with, and helpfully, when discharged as wisely and generously as they have been in many instances.

Our earlier hospitals for the insane were placed in or near large cities or towns. Where they have not yet been driven to remoter locations, they remain to encounter increasingly unfavorable restrictions of the freedom of the patients, or the offended public sentiment of even enlightened citizens. Such suburban situations could be held only at an incredible cost, in the actual economies of the existence of such institutions, as compared with an investment of values calculated to be productive of the greatest good. The opinion has been determined by the necessities of the case, that rural locations for large hospitals are the best, when large estates are proven so essential for outdoor life and occupation.

The present method of managing our hospitals is questioned. We may as well at once set down the dictum that the management of a hospital is a business that has to be learned like any other business, by both its executive officers and governing boards. The fundamental principle is that "those are best qualified to conduct a business who are best acquainted with its requirements." Let us turn for a few moments to some historical evidence on this point. The first that I shall cite has a double significance. When Florence Nightingale went to the Crimea in 1854, with her nurses, her superior success was due not altogether to her better knowledge of hospital requirements. She was free to coördinate the forces that produced the results. The medical staff of the English Army had enough of such knowledge to have had better hospitals than they did, but tradition and official formalism tied the hands of the military surgeons by denying them adequate control of that which was truly within their province.

The American war began with like restrictions, but their reform was one of the crowning glories of our profession in the century's

history, and set a model for the world. Who can read unconvinced in the annals of those events* the record of the "liberal course" of our Government and its great results? The medical historian also tells us how, in the first years of the war, the military superstition was broken down that only line officers could command men and perform the duties of executive officers; and how there was developed by medical men an efficient system of hospital service† that proved conclusively the error of the opinion which still prevails too much, that to be a physician somehow disqualifies a man for the business of conducting a hospital.

The medical men of our armies, with no previous training in operations of such magnitude, and coming from the quiet practice of the arts of peace, or young men from the schools, achieved professional distinction; they held efficient control of military commands; they organized and administered extensive supply and transportation departments. There are enough of the men still living who were a part of those great events to bear testimony to their significance. It was the "liberal course" of the Government in the giving of adequate control and holding the officer to full responsibility that brought out the good results. But it would seem that great lessons must be slowly learned by the average mind. It is curious to see, throughout the country, the tardiness of the general hospitals in adopting a principle so plainly demonstrated. A few of these great hospitals have been placed under the administrative charge of medical men; and it is noteworthy that in some of the most successful instances the search for super-

* "Never before in the history of the world was so vast a system of hospitals brought into existence in so short a time. * * * They differed, too, from the hospitals of other nations, in being under the command of medical officers. Instead of placing at the head of establishments intended for the treatment of disease and wounds, officers of the line, who, whatever their other accomplishments, could not be expected to understand the requirements of medical science, and who, with the best intentions in the world, might seriously embarrass the action of the surgeon, as was really the case in the Crimean War, and has been since in the English hospitals, our Government, with a wiser discretion, made the surgeon the commandant of the hospital, and thus, while holding him responsible for the results of its management, put it into his power to do much to make those results favorable. The medical staff can point with pride to the consequences of this liberal course. Never before in the history of the world has the mortality in military hospitals been so small, and never have such establishments so completely escaped from discases generated within their walls."—*Circular No. 6, War Department, Surgeon-General's Office, p. 152.*

† "The surgeon in charge was entrusted with full and complete military command over the persons and property connected with the hospital. He was held to a corresponding responsibility. At small hospitals the surgeon in charge was his own executive officer, but at large establishments an active and intelligent medical man was detailed to aid him in his supervision. The special duties of the executive officer were those of adjutant to a commanding officer."—*Med. and Surg. History, War of the Rebellion, Part 3, Med. Vol.*

intendents led to the choice of men who were already trained to their business in hospitals for the insane, which are in this regard far in advance of the general hospitals. These have yet to develop an adequate system by which the training of medical officers in junior positions will furnish a corps from which to appoint the future superintendents. The recent adoption of this principle in one of the leading municipal hospitals of this country is the first instance of the kind of which I have any knowledge. In that instance, it is also noteworthy, an eligible candidate for assistant superintendent had earned his appointment by qualifications gained in the service of hospitals for the insane.

The history of the present prevailing method of administration in our special institutions for the insane is really, in itself, conclusive. Can it be possible that we must fight over again the contest of the century for the establishment of the medical government of our hospitals? It was the contest of their emancipation from hideous barbarism, and of the philanthropist and the humane physician, with "good attendants," against the wardens and their "keepers." Let the uninformed read Tuke's History of the Insane in the British Isles, and study the work of the Lunacy Commissions in Great Britain since 1828, to learn the part that was borne through years of discouragement by our profession. Conolly's leadership in England's great reform, we all know. His work on the "Treatment of the Insane," published in 1856, is a book into which he wrote, with the sincerity of his soul, the history of his life's labors accomplished in his thirty years at the great hospital at Hanwell. Who can read his pathetic "Conclusion" and not be moved by the picture he draws of badly organized asylums? He wrote of experiences in which, "above all, the heart of the superior officer must be discomposed and saddened."

Every critic of the present system of hospital management, every doubting friend of the insane, should read Conolly's estimation of medical men in these relations as they were known to him by their works. "Considering the various education of men of different professions and ranks, none would seem so likely to be fitted by their diversified studies, and by the practical application of them to the preservation of the health of men and women, to undertake the mental, physical, and moral government of lunatics and lunatic asylums, as medical men. Their various knowledge; their practiced observation of the effects of bodily diseases; their constant intimacy with the modifications of both physical and men-

tal phenomena in all the accidents of life; and the very nature of their daily occupations, by which the best human feelings and sympathies are almost necessarily called into exercise, must generally be supposed to impart qualifications to them which are rarely possessed to the same extent by men in any of the other walks of life." He found these qualities illustrated in a high degree "among the medical superintendents of the last sixteen years (1840 to 1856), and particularly since the dawn of what may be termed the mental government of the insane."

Many of you have read his closing words, but they are so much to the present purpose for others to hear that they should be quoted: "My personal interest in such matters has ceased. The wildest resolutions of committees* can affect me no more. But knowing too well what rash experiments may be made by committees, * * * I can not refrain from recording my opinion, founded on long observation, that the proper treatment and the welfare and happiness of the insane is insecure under governing bodies constituted as those of asylums now generally are. Full security might, however, be given to the public, and every advantage of the insane surely preserved, if the control of asylums was always entrusted to intelligent superintending physicians, acting under the general inspection of a board or committee qualified for such *superintendence* * * * who would entertain no apprehension of evil from delegating such full authority to the physician as would leave him at liberty to carry out comprehensive plans, according to principles admitted and approved by them, and at the same time possessed of authority empowering him to enforce conformity to his measures among all other officers. Thus, and thus only, I believe, might be established and maintained a consistent plan of asylum government, advantageous and humane in relation to the patients, encouraging to all the officers of such establishments, and just to the community at large."

In our own country there are those among us who remember the lingering examples of institutions with divided authority, and the consequent heart-breaking difficulties; and they know the peacefulness and efficiency that came from the changes to medical control brought about by the logic of experience. Can we not name the names of good and able men who were defeated in the noblest aims in conflicts with non-professional dictators? It is noteworthy that the reversals, in some modern instances, to the old system so

*Governing boards.

stamped with condemnation have been made by men new to hospital government, who, in their discontent with individuals, and defiant of recorded experience, rush to the illogical extreme of changing at the same time both the *personnel* and the *system* of the institution in their keeping. That experiments in divided authority may appear to work well for a time proves nothing; it is a cause for wonder that the constantly occurring evidence to the contrary can be so ignored. We have no assurance that the division of control between a medical director and a warden will lead to more productive scientific work in a hospital. There must be a line of union somewhere between the closely related medical and executive operations of a great hospital. Such an institution is a mechanism which obeys the law that efficiency goes with reduction of friction. Harmony is the perfected result of an efficient administration; the logical basis of harmony is unity of control in all business organizations. If the facts of experience give the right to anyone to speak as having authority, it should be declared as beyond question that a properly organized system, under unified control, carries itself along with a degree of ease that no other method can obtain. Instead of spending his time and strength and fretting his soul with fussy details to avoid friction with a coördinate authority under the same roof, or leaving things undone that ought to be done, a chief executive with experience gained by time and training, and duly empowered, will make the various elements of his household fit together in a harmonious whole.

It is simply a matter of organization. Let the lesson of the great military hospitals be followed. In a large asylum a "liberal course" on the part of its governors would soon prove that no more productive investment of public funds could be made than in strengthening the executive head of the institution. If more professional work is wanted of him and he needs more time for it, let him divide both the executive and medical duties with an executive officer—an "adjutant"—as it was done in the general hospitals of the Civil War. Members of governing boards should put the kind of common sense into their hospital direction that they do into the business of their corporations, and employ trained men, and train others to competency for the work that they ought to do.

The truth of it is, if we search for a general principle, that everything in a hospital is medical, and is administered for a medical purpose. There is one end to which all things contribute. In the first place a hospital household is an organized social unit; as a

family of men and women, young and middle-aged, it should be under a controlling head, *in loco parentis*. The hospital is the home for those who live in it, and their lives, liberties, and happiness are largely in the hands of the controlling authority, for order must reign. It is a household organized to do business where the people live. The moral, ethical, and business atmosphere of the place must be calm and wholesome in its influence upon the sick and insane; this is healing alike with the aseptic conditions of a surgical ward. It is bad construction not to have the material supports of an edifice well "bonded" throughout; there should be no lines of cleavage ready formed, where it tends to split apart when the inevitable strain shall come. It is equally repugnant to social as well as mechanical law, that a domestic organism should be constructed without the common bond of unified control. In a large hospital for the insane, even the kitchen, laundry, shops, and farm are places for the treatment of patients by occupation. The conduct of these essential parts of a great institution should be inspired by a controlling medical spirit.

A military hospital established with a comparative permanence is the easiest to manage; there are only men in it, and the daily and nightly rounds of duties are done by soldiers, who obey orders. There is no home, and little sentiment is essential in such a hospital. In a general hospital the domestic sentiments enter with the home life of the people when "off duty;" some must be protected and others controlled. The management is more difficult by the multiplication of details arising from a rapid movement of the hospital population, and the adjustment of the complex relations with a large visiting staff, with whom, although one way is often as good as another, each wants his own. The patients, however, being mentally well, are expected to voluntarily obey the rules. Still a medical government best coördinates all these elements. In hospitals like ours the executive demands are much less exacting, by as much as the life and business are more regular; a well-ordered system may leave the executive head large freedom for giving time to the supervision of the "mental government," as the purpose of the whole régime. The patients here are most dependent upon the parental element in the social order; the medical superintendent represents the authority that applies the required restraint, and the more paternal this can be the better. Conolly's idea of "mental government" was right. The moral and disciplinary effects of a well-conducted institution have their most

effective medical uses. I once heard the lamented Goldsmith quote a saying of his neighbor at Danvers — the poet Whittier — “an institution is the shadow of a man.” This could never be more truly said than of Whittier’s neighboring hospital, where he must have observed that it is the spreading of the influence of its head throughout such a household that makes it one with him. That was what Conolly saw in the new order of “medical superintendents,” in “the dawn of the mental government of the insane.” This makes the title a term of honor for all time. If any think it can not be borne by a medical man without loss of dignity, let him read the lives of Conolly and of many other conscientious and able men who, since his time, have worked out for themselves the same conclusions. There are generally reasons for things. And when principles, struck out by such men, have made their way for half a century until they prevail, they are not to be treated lightly. Conolly’s “mental government” meant medical government. A “medical superintendent” may combine the several dignities of “medical officer,” a “medical inspector,” “medical examiner,” and other allied professional and business offices. I never heard it denied to any specialist in medicine that he might manage, without loss of professional caste, his own *res angustæ domi*, or a private hospital for his personal profit.

A medical officer such as I have described, trained and promoted through the various grades of junior positions, most certainly acquires the assured capacity which alone is to be relied upon for the best results. Such a medical executive, thus trained by professional and executive experience peculiar to a hospital, becomes the one who can most effectively and easily use this hospital as a perfected instrument which he can fully grasp and wield. It is the combining and coördinating faculty that must be had, and this is as much a part of the essential foundation as the material hospital is requisite as a shelter before any patient can be well treated in it.

Let us suppose that a medical man has acquired these abilities, favored by having the requisite time and experience to make his hospital successful. Is it essential that he should have kept pace personally in his acquirements with the various special departments of medical science that might be brought into the work of his hospital? The president of a university may be a learned orientalist, an adept in biological research, or an expert in the new electrical science. Who demands that the head of a faculty of arts and sciences shall be a master of all these? In the medical department

alone general medicine, as an applied science, now demands the expert contributions of the pathologist, chemist, neurologist, and bacteriologist for completeness of work in any hospital. All these and more must be included in the scope of the trained executive of a hospital for the insane, where an experienced alienist finds his largest place. Which of these specialists can best compass the work of all the rest? The trained executive is the foundation of the whole matter, and the day is to come when, as a medical specialist, he will rank with the honor due his usefulness. If this seems a modest aim for a physician, let it be remembered that there are places in professional as in business and social life, in which the men who are demanded to make the best contributions to the common weal are those who have it in them to be the cause of good in others. But the man who is well grounded in general medicine is the better physician when he has "business sense," which means — when he has a logical mind. With this, and training and experience being given, the requirements are furnished for best organizing a medical business. Here we get the true view of our present point of departure for advancement; there are many, and there might be more, medical executives of our hospitals who have risen to their places of trust, as men do in other business, because they have the power of "combination." Knowing the elements of their medical work they are the very ones to organize it. Like the college president, who, by a combination of skilled teachers, becomes the cause of learning beyond his own, so the skilled medical executive is the man to organize the means and inspire a medical staff with the zeal that begets competency and good work.* Therefore, it is now that our time has developed so many medical superintendents who are skilled executives, that with their opportunity comes the obligation to enter upon the newly opened fields for the organized investigation of our problems, which are of so much concern to human life and happiness.

The opportunity and obligation of governing boards come also here. But it requires a very intelligent and very practical business sense — that is somewhat rare in the controlling authorities of our hospitals — to understand that some of the most productive scien-

* Dr. Wise, commending his practice of holding a daily conference with his assistant physicians, forcibly says, for all of us: "It is not common for a superintendent to find that an assistant has outstripped him in scientific attainments, and that Gamaliel can properly sit at the feet of Paul. This should not be a matter for regret."—"Medical work in Hospital Wards," *AMER. JOURN. INSANITY*, July, 1895.) We must all agree with his meaning, that it should not be otherwise in a well-ordered hospital which has growth in it.

tific work is not to be tested by an immediate demonstration of the question: "What's the good of it?" It is the most practical mind that best appreciates the true relation of necessary causes to effects, when these are remote, in matters on the boundaries of knowledge for the most acute professionally trained minds. It is often the wisest superintendent who sees the futility of trying to do what can not be done. It too often takes long years to educate people, legislators, governors, and trustees to the consenting stage; and when the medical superintendent knows that his executive life is likely to be short, the possibility of professional attainment offers little to inspire his zeal, and it is thus that he grows to be a man who must be content with making ends meet between appropriations and *per capita* cost, instead of making these elements serve the larger purpose.

In the more enlightened States it is one of the most inspiring signs of the times that in the last few years so many of our hospitals, and the younger men in them, are being stirred by the doing of new things in the advancement of clinical work. It is here that the governing boards ought to see the worth of a "liberal course," and should provide the means, which are relatively so moderate, and give the stability of support that is required.

A wise observer of men and things recently said to me: "Man progresses on diagonal lines; in trying to strike a right line he pushes off on either side. It is like the skater; he gets on, but in his efforts to reach the true mean he goes to the right and left. The reformer is always pushing off *from* something; the idealist continually strives to go *to* something." This suggests to me the thought that when a good man, in his discontent with things as they are, tries to change them, he is accorded the rôle of a reformer. He is a safe man to follow when his reforming is well informed. Conolly was a safe man for a leader, because he knew his cause from the inside. When a bad man assumes the rôle of a reformer it is likely to be for base ends; he may profit by the laxity of old conditions or new looseness. He is a reactionist. But the reformer who only knows his cause from the outside is in danger of doing harm in his good intent. Like the skater in unfamiliar places he may "push off" too far. Such "reformers" do more damage than the reactionists; indeed they are the more dangerous; by as much as they are known to know many things people are apt to think they know all things. It is the commonest thing in life for many people, who are bound to have some change, and speedily, to hurt

the cause they wish to serve. In our great work it is the safest and surest to prove all things and hold fast that which is good. The mother of reform is discontent; but among her many children, good and bad, the best of all is improvement. Let us foster a wholesome discontent and have advancement by all means, but let it be true reform, if need be, and not such revolution as means reversal to things obsolete. One of the morals to be drawn from this is, that when reforming is needed in our work it is for us to do it.

In recent discussions of the proper place and function of the alienist as a hospital physician, there has been a subtle intimation that his desire to establish a medical government, and to have "control," is somehow to his discredit. The implication seems to be that he is "a jack at all trades and good at none;" or he is

"At once a cook and a captain bold,
And the mate of the Nancy brig."

The case of the *soi disant* captain in the ballad was a peculiar one, but he survived his perils, and, though he had but one story to tell, let us hope our fate will not be less fortunate.

II. THE RELATION OF PSYCHIATRY TO GENERAL MEDICINE.

The position of the alienist in his relation to general medicine has a most interesting history. He was in the beginning of the modern science of mental medicine, a hundred years ago, always a general physician; it is really true that he has been so ever since. Surgery, long set apart as a somewhat special department of medical science, has a comparatively limited field. An eminent surgical writer* says that "the charm of surgery is because it is visible, and tangible, and demonstrable"; its brilliant modern triumphs make it most attractive. With its "external pathology" it is "still to some degree uncertain, but not nearly as much as medicine." "I think," he says, "there is no doubt that medicine requires a higher grade of intellect and more judgment than the practice of surgery." Most of the modern specialties, so-called, are subdivisions, and sometimes refinements, of surgery in their methods of examination and treatment. Psychiatry, however, so far as it is a specialty, is closely allied to general medicine; it finds its etiology in all bodily diseases. There has been a mistaken tendency on the part of ourselves and others to include psychiatry wholly in the new science of neurology. The alienist, it is true, has to do directly with mental symptoms, disorders of brain function, and, therefore, of the

* Cheever, "Lectures on Surgery," p. 2.

nervous system, and this goes to all parts of the body. But it is the same for the general physician; he deals commonly with mental symptoms in all forms of febrile delirium, for example, and is more or less of a practical psychologist in the whole range of his art. The alienist, as a psychologist, is a general physician who is a student of neurology, and uses its anatomy and physiology; but he does a great deal more, for he must include all the bodily organs. He must study all the functions of nutrition and excretion. He is being aided by the more promising contributions from organic chemistry; and bacteriology, in the wonderful advancement it is bringing to the whole science of medicine, is explaining the analogy between the toxic influences produced without our bodies and those within them. Not only do bacterial products poison us, but those of our own vital processes that are toxic in conditions of disordered function and in disease, are also the more or less direct causes of mental symptoms. Thus it is that psychiatry is shown, more than ever before, to be dependent upon general medicine. The best definition of insanity is that it is a symptom of bodily disease; in its initial, acute, and curable forms it is a condition due to nutritional changes until consequent damage accrues to the nervous system and the mental organ itself. It is later that we reach the pathology of the neurologist, for in the order of the symptomatology of nervous lesions the general physician and the alienist come first, when the causes are not traumatic, or other forms of surgical disease.

Neurology, in the practice of the modern specialist, had at first a comparatively limited field. Among the newest of the special branches of medicine, its achievements have been brilliant. One of the earliest of these which, in this country, had so great an influence in establishing neurology on its present basis as a clinical science, was the remarkable study in the wards of the military hospital of the effects of nerve injuries caused by gunshot wounds observed in soldiers of our Civil War.*

The methods of neurology have been distinctly anatomical, and the force of its scientific research has been largely directed to the localization of the lesions of the nervous system by carefully comparing observed symptoms with pathological findings. These methods have yielded such exactness of results in diagnosis, that like precision has been demanded in all lines of clinical inquiry

* Mitchell, Morehouse, and Keen, 1864; and S. Weir Mitchell, "Injuries of Nerves and their Consequences," 1872.

relating to the nervous system and assumed to be neurological. Out of this there grew the disposition to reproach the alienist, as if he held only a limited place in neurology, for not having demonstrated to an equal degree pathological findings to account for all morbid mental phenomena. With the reinforcement of the early promises of the new experimental psychology, which first addressed itself to the more mechanical lines of inquiry, it became still more the fashion, a few years ago, to regard the alienist as a specialist in neurology and nothing more. Psychiatry has been charged with being slow in its progress, as having no coherent principles, resting upon an indeterminate basis in anatomy, physiology, or pathology, and, therefore, as being unscientific in its classification and therapeutics. But Krafft-Ebing, in noting this fact, claims the establishment of "Psychiatry as a Clinical Science," and says that the results offered by pathological anatomy are for the most part negative, and the few positive ones not surely indicative of their genesis, and worthless for the explanation of the disturbance of function known to have existed. Then psychiatry, he says, seems almost exclusively dependent on itself, and is limited to the direct observation of psycho-pathological phenomena, and from the empirical valuation of these is obliged to draw conclusions as to the kind and degree of the functional disturbance of the psychical organ. These psychopathic phenomena are, however, no mathematical quantities, no physical phenomena, nor even chemical secretions, but are phenomena of a peculiar kind, being the so-called feelings, ideas, and will-impulses. The course of the psychoses are discovered through observation as in any other disease. Psychiatry, now raised to the value of a clinical science, must be studied by its own methods. He says, "it is more than a specialty, and a necessary complement of medical study, inasmuch as man is not simply an eating, breathing, and feeling machine, but a spiritual personality, whose psychical functions are intimately bound up with his somatic, morbid processes."*

An American philosopher† shows that "each of the real and concrete forms of existence which are known to man, boundless as their number and variety may appear, falls nevertheless under one or another of three great types of real being, viz., the machine, the organism, and the person." The surgical specialists and the neurologists have been mainly studying the human being as a self-

* Wiener Klinische Wochenschrift, October 24, 1889.

† Abbot, "The Way Out of Agnosticism," p. 54.

making and self-working natural machine. These specialists have called to their aid anatomy, physiology, and pathology in their examinations of the organism which, when out of order, they try to mend. The general physician must go farther in his dealings with the organism while using the same aids; he finds that in treating the disorders of the personal man, he has constantly to reckon with him as also a rational being, whose organic machine is his instrument; and so far every such physician is a practical psychologist. But the alienist as a general physician is especially concerned, in his wider field, with the whole man, for psychiatry deals with the mind of the man and must seek for causes of its disorders in the whole man.

I have said that the methods and field of neurology in medicine have been distinctly anatomical. It is another of the interesting signs of progress in our whole science that the neurologists are finding the need of psychology to explain their problems, and are being led thereby into a better comprehension of psychiatry. In any assemblage of "neurological" papers it is now noteworthy that while the major part of their titles have an anatomical or surgical bearing, a fair proportion will be upon mental subjects. While many of the writers are alienists, yet there have been neurologists who, from the beginnings of their science, have recognized the presence of the psychical element, though much as the general physician has done. The importance of this element as modifying and even causing nervous symptoms is now being more correctly estimated. No more significant indication can be noted as an example than the clearer recognition, within a very few years, of the true nature of hysteria and its alliance with neurasthenia, through the remarkable elucidations of Charcot and his school, and by Loewenfeld, Pierre Janet, and others. Great difficulties are being solved by the growing knowledge of the fact that underlying all nervous and mental phenomena there is a range of subtle changes in the conditions of the organism that are common ground for the alienist and neurologist. The bond between them may prove to be the still newer science of physiological psychology, wherein may be found a rational basis for an understanding of the relatively intangible mental observations and the beginnings of the grosser changes whose study has given a marked character to the work of the neurologists. The importance of this is shown in the broadening of the view of neurasthenia as being, in certain forms, either a disease by itself, a condition underlying many other nervous diseases, or

the true characterization of a chronic condition, whether acquired or hereditary.

We read in the writings of eminent neurologists, discussions of such subjects as "Association Neuroses; Neurasthenia and Allied Forms of Neuro-mimesis," by Prince*; and "Remarks on the Psychological Treatment of Neurasthenia," by Putnam.† The work of Bouchard and others in pathological chemistry, and the revelations of bacteriology concerning the effects of infectious and toxic influences, have made contributions to general medicine that have been applied by the French alienists to the study of insanity. Our American neurologist, Mills, has written on "The Relation of Mental Disorders to Infectious Disease," ‡ and Putnam,§ on "The Relation of Infectious Diseases to Diseases of the Nervous System."

When Van Deusen, in 1868, published his ideas of neurasthenia in advance of Beard, he had a much broader and truer conception of the conditions that underlie mental as well as nervous diseases. It is the alienists who have developed this conception, and who have brought out the present understanding of the relation of chemical and toxic processes to mental diseases. In a recent address on the "Causation of Nervous Disease,"|| by Starr, are summed up the results of our present knowledge of the changes in the chemical and physical condition of the neuron, showing that the essential lesion in functional and organic diseases may be produced by overwork, by imperfect nutrition, or by active poisoning, from active toxic agents produced within the body, or from those of an organic or inorganic type received from without. Thus has general medicine contributed both to neurology and psychiatry, through the principles discovered by bacteriology, an explanation of clinical phenomena long recognized by alienists who first anticipated the true conception of mental disorders as finding their most prolific cause in conditions of nervous fatigue and exhaustion.

These are valuable essays in the domain of psycho-pathology or in close relation to it; but psychiatry has much to give to, as well as to take from, neurological medicine. It should be kept in mind that if psychiatry is neurology it embraces a far wider range of disordered conditions from diseases of the body than are noted in

* Jour. of Nerv. and Ment. Diseases. May, 1891.

† Bost. Med. and Surg. Jour. May, 1895.

‡ Am. Jour. Med. Sci. 1894.

§ Am. Jour. Med. Sci. 1895.

|| Western Reserve Med. Jour. May, 1895.

the manuals of nervous diseases, although these, latterly, enumerate and treat upon, though meagerly, the diseases of the mind. But neurology, although still notably deficient in therapeutics, demands of psychiatry a greater ratio of "recoveries" from insanity than has been shown, apparently forgetful that a large proportion of the patients who have other diseases never get quite well at the best, and still may return to their homes and business, as the uncured insane can not do.

The question of the large contributions that may be made by neurological medicine to psychiatry is one that will bear examination. The advances in histology are so marvelous and rapid that the student of five years ago must now recast his knowledge and conceptions of the physiology and pathology of the nervous system. The alienist has his aid direct from this new knowledge, but welcomes eagerly the "deductions" of all careful observers. But if such deductions from anatomical neurology sometimes take the form of authoritative and instructive dicta, concerning, for example, "the effects due to an exaggeration of the unknown ganglionic or other alterations, without demonstrable lesion," we may be pardoned if we do not take for guides our most agreeable counselors and friends.

In the relation of psychiatry to other departments of medicine the alienist has had to encounter the criticism that he has not been productive of scientific work. We have seen that in its very nature it has not, even yet, the objective character in its pathology that makes it demonstrable by mechanical methods. In the work of the alienist the century has been an age of construction—of laying foundations and building shelters, and thus largely of providing for the more material care of the insane. The problems of this kind to be solved have been difficult and often overwhelming. That the work has been done by medical men better than it could have been done by anybody else is beyond question. If, in their annual reports, the record of their labors is read in an appreciative spirit, one could not fail to be moved to sympathy by the pathetic history. As an example of this I had recently the privilege of hearing an account, written by Dr. Babcock of the South Carolina Asylum, of the efforts made in the last forty years to provide for the colored insane. It was the work of men among whose names are those of Stribling of Virginia, Green of Georgia, Tyler of South Carolina, and Compton of Mississippi. The mention of them awakens memories of a generation at once honored and honoring

that has now passed away. The humane purpose that was sustained through years of discouragement, and the arguments presented in appeals to legislatures, too often futile, betray a degree of foresight, wisdom, and devotion that commands respect. These were scientific labors in the worthiest of the professional and social obligations of enlightened men. In these and kindred efforts the experienced alienists have become conservative as well as painstaking; no brilliant discovery is possible for them, to inspire their zeal with an exhilarating freshness, and they have long been learning to refrain from the voluminous publication of conjectures and deductions concerning the unknown and undemonstrable. There is something to be said also of the perennial proneness of us all to regard everything foreign "pro magnifico." When we are asked why the results of the new science of physiological psychology are not being applied to the elucidation of psychiatry in this country, the following abstract of recent comments, by a German writer,* is a sufficient answer.

Very few alienists in any country have gone carefully into the question of experimental psychology or have made experiments themselves. Buccola, in Italy, more than a decade ago, attempted to apply the psychological measuring of reaction time to pathological cases; but, owing to his early death, this and the work of a few followers soon stopped. Later some Russian psychiatrists, partly influenced by Wundt, attempted the experimental investigation of pathological mental conditions; and quite recently, in America, the attention of some of the younger psychiatrists is awakened to the new psychological methods. But up to the present day, Kraepelin is the only German alienist who has attempted to study the particulars of psychological experiments, by working himself in a laboratory. It is very significant that, in this unique instance, Kraepelin, whose training was with Wundt, has felt compelled to spend some years of preparation in devising special psychological methods before any could be made applicable to the peculiar psychical processes of the insane.

That there is something to come out of this pathological mystery is not to be doubted. Kraepelin, with his painstaking caution, is bringing out promising indications for the better estimation of mental symptoms by their analysis upon a psychological basis, through the application of certain methods entirely new with him.

* Kraepelin: *Der psychologische Versuch in der Psychiatrie. Psychologische Arbeiten.* Leipzig, 1895.

His fine elucidations of the "exhaustion psychoses" represent, however, the results of a kind of clinical study to which contemporary workers in other countries have addressed themselves; and there have been those who, within the last decade, have initiated laboratory work upon like problems in different ways. To demand results at this stage of progress is calling for the fruit of the tree before it is grown. Neither are we without the promise of scientific advancement in the direction of "pathological findings," in the work of members of our association of alienists. The difficult character of our problems forbids any trivial treatment of the labors bestowed upon them, and certainly exuberance of critical judgment is untimely now that the trend of inquiry has changed so much the data of general medicine, in which the alienists have always found their rightful field. In common fairness the question should first be answered: From what sources, other than the alienists and their hospitals, have come any real contributions to the study of mental disorders in relation to their physical causes?

It should not fail to be mentioned here that there is a most encouraging indication in the work of our hospitals, which allies it with the methods of the general hospitals. Ten years ago there were only two organized schools, then newly established, for the training of nurses in hospitals for the insane. In 1892 there were twenty-four such schools in operation in this country. This year there are thirty-eight of these schools in American hospitals, that have yielded a total of 896 nurses, including men and women, qualified by being instructed in their special work. In a number of other hospitals the establishment of the new system in the nursing service is already begun.

Considering the opposition to this movement in certain quarters, the difficulties in others, and the remarkable failure in some instances to recognize the absolute need of training and experience in such general nursing as may be required in asylums as the first principle of success, it leaves little room for complaint that advancement is not being made in this important particular.

III. THE PROMOTION OF PROGRESS IN THE HOSPITAL TREATMENT OF INSANITY.

This discussion of the advancement of psychiatry has been limited, so far, to a study of our present "foundations." In pursuance of my argument I have endeavored only to characterize, in general terms, the way in which we are really trying to do our work,

— the plan upon which we must expect to build. In the first place we have our hospitals as they are; let us do the best we can with them. It is a maxim in the conduct of hospitals that a bad hospital can be made a good one by good keeping. To men who have learned the business of keeping a hospital, and practiced the art of conducting an institution that should be well organized if business success is to be hoped for, there is no need of assuming to give instruction. The problems relating to hospital economies, the material comfort of the patients, and the curative effects of occupation, etc., are all familiar to you. I may be allowed, however, to say a few words in regard to an ideal hospital organization with respect to its clinical and scientific work. If one were an autocrat, and such a thing were conceivable as being the controlling adviser of a hospital corporation, board of governors, and all concerned, it is easy to say what one should do. My ideal hospital should have the best executive and medical staff that the purse could support, of which I held the strings. The principles should be that no part of the investment in a business is so profitable as that which procures educated and skillful direction. The chief executive should be a man trained to his business and of proven capacity for that particular business, so that with proper assistance his purely executive duties should be to him simply incidental to the use of the hospital as an instrument applied to its intended purpose. The business office of the hospital should be in charge of a competent man, who, as a clerk and cashier of the hospital, with proper assistance in the bookkeeping, would act as "adjutant" to the superintendent; as such he would prepare and coördinate all the executive office details, but have no executive authority himself. The present office of steward should become that of a purveyor, who, as "commissary" and "quartermaster," would be the buyer of supplies as for a commercial house; he would have charge of these and the oversight of the farm, etc., but he should have no handling of money or keeping of the financial accounts, which belong to the treasurer's office. Then the maintaining of all proper checks upon the purely business operations would be done by the "adjutant," for the superintendent, who could keep himself duly informed without the routine labor of applying the checks himself, as he may do, however, at will. The superintendent should be well educated in general medicine, so that the medical government of the hospital, and the "mental government" of all within it, should have a basis of the broadest understanding.

The clinical assistants should have perfected their education by hospital training or successful practice in general medicine; and they should be chosen by the superintendent by nomination to the governing board, and he should be responsible for their efficiency. The senior officer should systematically share in the "medical government" of the hospital in all particulars for the sake of perfecting his training. There should be a woman for an assistant physician in a large hospital, or a consultant in gynecology, and consultants in other specialties, to be called when needful, as the physician calls them in general practice. There should be an accomplished resident neurologist on the staff, or a physician especially educated in neurology—not for a chief of staff, because his views would need the broadening and adjusting that would mutually come by contact with the physicians of the staff experienced in general medicine, and by the discussion of clinical problems in the regular meetings of the hospital medical society. Thus I should expect all of the medical staff to become, by and by, practical neurologists as well as psychiatrists. Later, in the natural evolution of things, there might be a neurologist for chief executive, when he had learned also the incidental business of management; he would have become, by that time, also a general physician, as an indispensable requisite, and as a practical result of medical work so conducted. The newly appointed neurologist should have some clinical duties, even though limited, from the first, if in no other way, at least by taking the places of the regular clinical assistants in a system of giving "a day off" to each every other week. Such an organization provides for an effective division of labor that relieves the clinical assistants from the routine of keeping case records, etc., which may be better done by those whose time is less valuable. Thus, more attention can be given by them to the patients themselves, and to the important necessity of keeping informed in the literature of the subject.

The laboratory should be in charge of the neurological assistant, because he is supposed to be well informed in nervous pathology. But the pathological work should be conducted on the principle that the pathology of insanity begins before the insanity does, and that post-mortem pathology includes but a small, though essential, part of the requirements. Therefore, the laboratory should be a place for the study of physiological psychology. This would cover the study of the initial conditions which lead to mental disorder, and promote the possible determination of the nature and causes of

departures from normal mental function. Moreover, in the dependence of their changes upon general physiological processes, and in order to take into account all the elements of vital activity involved, it would be supremely necessary to study both physiological and pathological chemistry in their direct and indirect relations to mental changes. This includes the effects of fatigue and its relation to exhaustion and auto-intoxication. For these reasons it would be desirable that the director of the laboratory should have an assistant especially accomplished in chemistry. There should be, as in general hospitals, a service of medical internes, or clinical clerks, as junior assistants, who should write the records of cases, etc.; their business being the study of medicine, it would bring in the principle that, in their instruction, he who teaches learns. I would make all the medical staff teachers in some way; the training of nurses helps to do that. Then there should be a school, the teaching in which can be well done and still become so far incidental to the general duties as to add little to the labors of the staff. Such a school can be so conducted as to affect little the cost of the nursing service; in fact the law of compensation works in all these matters. It is a matter of the organization of a business; whatever is good to do, is good all round — every good thing helps every other good thing, and the sum total is the greatest good. The success of such a business is a medical success, and the accomplishment of the results attainable in any large hospital by a well-sustained medical government is a success worthy, in the highest degree, of a physician.

My thesis is that the advancement of psychiatry in America must start from sound foundations; it is the chief business of our lives, and its conditions may be summed up in the following propositions:

1. Our hospitals should be conducted under medical government, as they are instituted for a medical business. They should be conducted by their governing authorities in such a way as to promote the professional efficiency of the medical executive staff; this implies the choice of such officers solely for their fitness, and that fitness is enhanced by experience, which goes with the stability of their work. It implies also a liberal equipment of the literature and appliances which are the well-recognized essentials of scientific professional work everywhere. The manner of life of these officers should put them on an equal plane as to compensation, with successful men of like capacity and attainments engaged in other branches of medicine.

2. The tendency in all departments of medicine and surgery has been toward limitation in specialties; this should be counteracted in our work in all possible ways that promote the broadening of the fitness of medical officers by affording better conditions for their education in general medicine while in the service of the institution, and by encouraging special neurological and psychological studies. Thus there should be a close union with all that pertains to neurology, and then advancement should be sought along the lines of a common alliance with general medicine under the law which Herbert Spencer calls the tendency to integration of all the present specialties in medical science. It is this tendency that, notably at the present time, is being strongly reinforced by the great developments in biology.

3. While it should be our aim to be general physicians in order that we may draw our aid from the whole domain of our science in our somewhat special work, we should draw also upon the newest knowledge of psychology. Thus our special mission becomes the study of the highest and the most difficult problems of human life in the preservation and restoration of mental health, and the sanity of that life.

Members of the Association: In this, the aim of your high calling, if you be but faithful you may rest upon the facts of your peculiar experiences, and as you lift your cause from stage to stage neither adversity nor any misapprehension of your good purposes, nor any evil thing, can rob the world or you of the blessings that in the end will flow from the devoted work of those who love their fellow men.

KRAEPELIN ON PSYCHOLOGICAL EXPERIMENTATION IN PSYCHIATRY.

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During the first half of this year an article appeared by Kraepelin, in which this author gives a summary of some of his work in psychiatry, of his efforts to make "the psychological experiment" applicable to psychiatry. Owing to the importance of this subject, a short review may be of interest to the alienists of this country. Perhaps a few preliminary remarks, however, will help to put the work in its proper light, and will show the standpoint from which the author views the study of mental diseases.

It is well known that for many years anatomical studies have taken a prominent place in investigations by those who deal with mental diseases, a fact which, from the history of psychiatry and medicine in general, is easily explained. These studies, with which many illustrious names are intimately associated, have brought forth many brilliant results; at the same time normal anatomy of the nervous system and the study of nervous diseases have derived the greatest benefit from these efforts, while the share which fell to psychiatry is, after all, very small. A knowledge of the anatomical relations of the nervous system, however, and an inquiry into the structural alterations, are absolutely necessary for a scientific study of mental diseases. But it is certainly a mistake to think, as many apparently do, that with this the work could be done; that the task of psychiatry lies solely in a pathology of the brain cortex, for we must certainly admit with Kraepelin that a pathology of the brain cortex, no matter how far advanced it may be, will never give us an insight into abnormal mental phenomena as such. As he says, in the introduction to his excellent text-book: "This would only be possible if the brain secreted ideas and emotions as the kidney secretes urine;" or, in other words, if an exact knowledge of the cerebral mechanism should include also a knowledge of psychical processes. "But nobody will deny," he continues, "that we could have a comprehensive knowledge of the finest molecular processes of the brain without having the remotest idea that we have before us the organ of psychical life. This is fundamentally different from the materialistic views which we find more or less con-

sciously expressed in many text-books and articles, even of the present day, in this and in other countries. In regard to the dependence of the psychical on the physical we know nothing more than that a relation exists, and a correlation of the two parallel lines, the abnormal mental phenomena and the anatomical (or chemical) changes, must, of course, be the final aim of a scientific study of mental diseases. That, in spite of many theories, the actual steps in this direction are very few, nothing shows better than the diversity of these theories. It follows, therefore, that it is necessary to approach the subject from two points of view, *with equally accurate methods*, namely, from the somatic and the psychical; and certainly mental diseases have primarily a psychical side to them, and it is by a study of their psychology that we have, above all, a chance to arrive at an understanding of the relations of mental symptoms among each other, and of their genesis, and to trace back complicated to more fundamental phenomena. But the advance of psychology has been rather neglected by alienists, in spite of the fact that the last decade has brought this study into line with the natural sciences. This circumstance, as well as the scarcity of actual facts, and frequently a leaning to a one-sided anatomical conception, have brought forth innumerable theories, so that no field of medicine is so full of hypotheses as psychiatry. The need of a sound psychological basis, therefore, and the need of having reliable methods, as in the other branches of natural science, which allow us to go deeper than simple observation can go, have led Kraepelin to make use of experiments which, thanks to the work of men like Ernst, Heinrich, Weber, Fechner, and particularly Wundt, have proved so valuable in normal psychology.

It is well in this connection to quote from the last paragraph of the article we are about to review, where Kraepelin says that it is time that, instead of indulging in deep speculations and ingenious inventions, we should go to work at a serious and conscientious investigation, advancing step by step; that we need facts and not theories, which latter have only a right to exist inasmuch as they allow of the formulation of problems, giving thus a starting point for the application of accurate methods to new investigations.

In what manner such work may be begun, what are some of the problems which can be formulated, what has already been achieved, how much preparatory work is necessary, and, finally, from what different aspects experiments may be made valuable for the difficult study of mental diseases — all this forms the contents of

the article which is entitled: "Der psychologische Versuch in der Psychiatrie.*" It forms the introduction to a series of publications to be issued at irregular intervals, in which Kraepelin wishes to put on record the studies done in his laboratory in the field indicated in the above title.

Before Kraepelin others have entered this field of work and have made some experiments of this kind, but nevertheless it is he who must be considered the first one who followed this line of study with a definite aim and with a logical sequence. He not only applied methods which were used in experimental psychology, but devised new ones particularly fitted for the investigation of abnormal conditions; and it is well to say at the beginning of this review that the objections which could be made to a study of this kind—namely, that experimental psychology is itself not enough advanced to be applied, and that it is questionable whether the methods there used are applicable to abnormal individuals—do not hold good, since Kraepelin takes the methods less from physiological psychology than the experimental method in general.

Besides the valuable aid which Kraepelin expects, and has in part already obtained, from the study of normal individuals with reference to pathological conditions, he hopes by experimentally investigating the latter to arrive at an analysis of mental diseases which is more accurate and complete than could be gained by simple observation, and it is significant of the manner in which the work has been done that many years (since 1883) were spent chiefly in studying normal, or artificially produced abnormal, conditions, in order to test the method, and to lay a foundation before investigating pathological conditions. This is, after all, the only proper manner in which to approach such a subject; and it is this same careful spirit, coupled with an exceedingly clear and unbiased objective judgment, which strikes us so forcibly in all the writings of Kraepelin, and in the article before us not less than in his other works.

In a short introduction, Kraepelin, speaking of the rapid development of experimental psychology, expresses his surprise at the fact that, in spite of the importance which this branch certainly has for the psychiatrist, the latter paid comparatively little attention to it. He dwells upon the difficulty of the subject, on the care which has to be taken in experimenting, which not only consists in collect-

* *Psychologische Arbeiten*. Edited by Emil Kraepelin, professor of psychiatry in Heidelberg. Leipzig, 1895, Engelmann.

ing a vast number of observations, but the most difficult part of which is to be found in the interpretation of the results.

A chapter of twenty-one pages on methods follows. Here the question is raised, where shall a study like this begin? The methods most thoroughly investigated in physiological psychology are difficult to apply to patients, and we must endeavor to obtain chiefly such as make less demand upon the person experimented upon, and are more like every-day occurrences; methods, furthermore, which do not require complicated apparatus, and not too long a time for experimentation.

In the field of reaction-time others have worked before Kraepelin, but inasmuch as these observers frequently failed to obviate the well-known faults of the chronoscope as an apparatus working by means of electro-magnets, their results are often doubtful. Nevertheless, studies in this field are by no means unfit for the purpose in view, *if the patients are carefully selected*. By interposing, moreover, between the elements of a simple reaction, other acts, as choice between different movements, associations, and the like, an insight can be obtained into these as well as, to a certain extent, into that particular element of a simple reaction which is altered, as the latter is in itself a complex act. Such studies of association times, together with other studies, have already led to some important results in the interpretation of a common symptom in mania and other affections. It had been thought that the incessant talking of such patients, the linking of superficial associations (or rhymes), which constitutes the "*Ideenflucht*" of the Germans, was due to a quickened association-time — that associations called up each other more rapidly than normally. The opposite has been shown to be true, and the whole symptom proves to be an outcome of the general motor excitement in which the motor processes of speech take their part.*

Among the methods originated by Kraepelin are the so-called continuous methods, in which in a given time as large a number of simple tasks must be solved as possible; thus, *e. g.*, the adding of units. (Appropriate books with figures have been printed for this purpose.) At a signal made by a clock striking every five minutes, a sign is made in the book. The amount of work done in such periods can be counted and compared. Other tasks can be

* Cf., also, Aschaffenburg: "*Ueber Ideenflucht*," paper read at the XIX. Wanderversammlung der südwestdeutschen Neurologen und Irrenärzte in Baden-Baden. Arch. f. Psychiatrie und Nervenkrankheit. Vol. XXVI, 1894, 597.

set—reading, memorizing senseless syllables (Ebbinghaus), or columns of figures, etc. In this manner we are able to study not only more or less simple psychical acts with particular reference to their duration, but also, which is of the greatest importance in this connection, the changes which occur during the work, and which are due to fatigue and practice and the like. Reading and writing can be investigated along lines already started. Moreover, studies have been made on the sense of touch by an appropriately arranged method, which allowed an insight into fatigue and centrally produced sensations in this domain. The sense of time, purely motor functions, and the depth of sleep, are other fields which have been looked into, and which promise much interest. All the methods which Kraepelin gives have not been mentioned here. Besides these, new ones can be devised, but yet all need first a thorough study with normal individuals, and a comparison by means of exact measurement in order to be certain of their applicability.*

An experiment in the best sense is one in which we can produce the particular condition which we wish to study, and in which we can not only alter it at will, but control some of the modifying conditions. Applied to the study of mental disease, this would mean the production artificially and intentionally of a mental disturbance. Although the application of this method must needs be very limited, it is nevertheless what the author attempts; indeed, he heads his second chapter: "Artificial Mental Disturbances."

To study the patients experimentally at the height of their disease is usually impossible; in the beginning of it they are, as a rule, not accessible to us, but during convalescence we may be able to obtain information through experimentation; nevertheless the former would be the most important, namely, the study of the first stages. And here it is possible, within certain limits, to produce the conditions under which deviations from the normal develop. In the first place the variations in our psychical state produced by the daily changes of external conditions must, in this connection, be considered and analyzed. They will be within normal limits, but we may fairly expect to be able to recognize by a study of them, the general lines along which pathological conditions become developed. Of these daily alterations there are two factors which first suggest themselves—fatigue and practice—but as soon as we go into the practical investigation of the question we find it

* Cf. former works: "Ueber die Beeinflussung einfacher psychischer Vorgänge durch einige Arzneimittel."—Jena, Fischer, 1892. Also "Geistige Arbeit."—Fischer, Jena, 1894.

complicated, resolving itself into many smaller ones. Thus, with reference to the former, the effects of fatigue should be studied when it is produced in a rested organ, on the one hand; on the other hand, when it is brought on in an already fatigued one. Bodily fatigue and mental fatigue should be investigated separately, and the influence of the one on the other be studied; moreover, the influence of external conditions, like nutrition, sleep, etc.

The rôle which over-exertion of any kind plays in the production of mental diseases is well known. Although we can not produce, experimentally, serious disturbances of this kind, nevertheless, here also, as was said, it may be hoped to get an insight into the direction along which these influences act; and a study of this kind may aid us to analyze, possibly, more complex mental disturbances, and we may be able to separate the essential from the non-essential.

Well aware of the impression which such statements will be apt to make on those who are not familiar with the subject, Kraepelin says that he is prepared to have this looked upon as "a castle in the air," "and certainly," he says, "we are very far from our goal;" but, on the other hand, there are also some results already obtained. Aschaffenburg made studies on the effect of exhaustion. He experimented for a whole night. We all know we feel different after a long night's work. But only by appropriate experiments was it possible to analyze this. There was chiefly a more difficult reception of external impulses. There were centrally produced sensations (hallucinations), a prolonged association-time. The associations were, moreover, more stereotyped, more superficial, as we find in the "Ideenflucht"; and, finally, the central motor excitability was greater.* Kraepelin notes in this the striking resemblance to an exhaustion psychosis, and draws attention to the fact that if we had to analyze a collapse-delirium we would come to the same conclusions. Since, in the latter condition, similar causes act and produce it, there is more than a merely superficial, outside similarity between the two conditions.

Another field for experimentally produced mental disturbances is to be found in some of the intoxications. Kraepelin's studies on the action of alcohol have led him to a better understanding of the mental disturbances ensuing from its use. The chronic intoxications can be better understood, and, moreover, it is just this study

* Cf., also, Aschaffenburg: "Die psychischen Erscheinungen der Erschöpfung," paper read at the Wanderversammlung in Baden-Baden. Arch. f. Psych. Bd. 25, 1893; 595.

which has led him to his present opinion on "Ideenflucht," and to the understanding of mania. The action of ether has been shown to be very similar to that of alcohol. Similarly of cocaine, and yet some differences have been observed, whereas morphine has been found to be quite different in its effects. Other drugs have also been examined. The study of all of them has not only a direct bearing upon our clinical experience with such intoxications, but also it gives us methods to study slight deviations from the normal mental conditions, and will aid in this way our understanding of other abnormal as well as normal conditions.

The drug effects, known up to the present time, as far as they have been measured, can be traced back to two fundamental activities of our psychical life, namely, to the reception and working out of impressions, and to the transmission of will-impulses; and the whole variety of action of the different drugs — alcohol, ether, chloroform, amylnitrite, chloralhydrate, paraldehyde, tea, and morphine — may be attributed to the varied combinations of acceleration or slowing of these two phenomena. Unquestionably the view obtained thus far is one-sided; and we must, by further inquiry, by formulating new questions and devising new methods, gain a more comprehensive view.

There is one consideration of which Kraepelin speaks in this connection which, problematical as it may yet seem, can not be passed over in this review. As we said above, the correlation of psychical alterations and physical ones has made very little progress. And how could it be otherwise? On the one hand there is no sharp observation of clinical facts; on the other no marked anatomical changes have been observed in the nervous tissue. In the latter an improvement is promised by Nissl's method; in the former, by accurate observation helped by experiment. Here the study of artificial abnormalities caused by chemical poisons, on the one hand, and, on the other, the lesions experimentally produced in animals, may lead later to a correlation of the two.

The third chapter is headed: "Personal Fundamental Peculiarities." Here Kraepelin comes to a very important part of his study, namely, the influence which the individuality of a person has upon the development of mental disease. This he estimates to be greater than has been supposed, external influence having a smaller share than was formerly thought. And although the extent of the influence exerted by a factor lately so much discussed, namely, auto-intoxication, can not as yet be estimated, there

unquestionably remain enough mental diseases in which there are no such circumscribed causes to be found at all, but in which the intrinsic peculiarities of the personality are to be made responsible for the pathological development. Degeneration, neuropathic taint, are terms which express these individual conditions. But such terms are vague, and sifting and grouping is necessary. This is the task of individual psychology. It is by no means an easy one, for we are dealing, not with tangible things, but with *processes*, which are changed and crossed by numerous and incalculable conditions in the most varied manner. Particularly interesting in this connection are the two properties of our psycho-physical organization, fatigue and practice. It was found that the latter was apparently different in different functions, while the former seemed to be a more fundamental property of the person. Of course in these studies many other points were found as these lines were followed out. The duration of the influence of practice in different individuals had to be looked into, and is unquestionably of importance. Another property was found which is different from practice itself. It is what we call "getting into the work;" it also increases the amount that can be done, but is of a different nature, in that it is lost very soon, whereas the effect of practice remains for a long time. That practice is nothing else than a special form of memory is further not to be doubted. Fatigue, on the other hand, lessens our faculty for work, and the amount which we can accomplish, but here Kraepelin says a distinction must at once be made between *fatigue* and *sense of fatigue*; they are two factors which need not by any means go hand in hand; on the contrary the two may be quite opposed to each other, a distinction which, in this country, has been insisted upon so strongly by Cowles.* Depressed conditions show frequently a sense of fatigue without fatigue. On the other hand, we find in anxious and maniacal patients an absence of the sense of fatigue; but fatigue itself may progress to profound exhaustion. Finally, Kraepelin thinks we may perhaps partly trace back the baneful influence of emotions to the fact that they rob us of the sense of fatigue, and hence disturb the necessary circle of work and rest. This is the more serious, since probably the sense of fatigue represents a necessary pre-condition for sleep. Both, therefore, should be compared particularly in our studies of psychopathical individuals. Just as in practice the duration of its effects must be studied, so here in fatigue the time for

* Shattuck Lecture, 1891, *Boston Medical and Surgical Journal*.

recovery, and with it possibly the depth of sleep, should be investigated.

Finally, a most important factor is the influence of distraction, or, rather, our power to resist it. This is our power of concentration. The importance of it need not be dwelt upon. To possess means for the measurement of this would be a valuable addition to psychopathological methods, but little has been done in this direction. We see from these points which have been selected, that here quite a number of personal fundamental properties have been found, which not only *may* be studied, but which, as experiments have shown, actually *can* be studied. The study consists in the finding of the rapidity with which different processes occur, be it in the domain of perception of external impression, in the association of ideas, or in the transmission of will impulses.

The *fourth* chapter is headed, "Psychical *Status Praesens*." In these psycho-physical properties, which, as has been seen, include neither feeling nor anything referring to the contents of our thinking, but are directed to the formal portion of our psychical life, to its dynamics, we have to deal with essentially psycho-physical factors. Although only a beginning of these studies has been made, a continuation may lead to a more accurate analysis of personalities and individual peculiarities than has been done before; above all, each step forward is made by experimentation, and reveals facts. In such studies methods will have to be devised, and tried thoroughly on one normal individual. The factors which appear to be the most important must be separated out, and must be studied by as short methods as possible on numbers of individuals. On the other hand, we must strive in the studies of individuals to get as many tests as possible to apply to them, *i. e.*, methods which give us an insight into as many parts of their psychical life as possible, for it is the whole individual which we are dealing with. In accordance with this plan Kraepelin has attempted, within the limits of the methods at his disposal, to establish in a number of persons some of their fundamental peculiarities, to obtain a *status praesens psychicus*, so to speak. This is, of course, as yet incomplete.

The study consisted of a careful arrangement, on five consecutive days—on each of which an hour's work was done—of the better developed methods above mentioned, so as to obtain an insight into as many psycho-physical properties as possible. But in addition to these methods he suggests, finally, others, which in part refer to the contents of our thoughts. He had a person write down

in five minutes as many nouns as possible, or sensory impressions which had a marked color, or things which produced noise, or things which were agreeable or disagreeable, or, finally, abstract ideas. He thinks that in this way we may get an insight (1) into the nature of association, how different associations are connected, what type of association is prevalent; (2) into the relative development of colored or of acoustic memory pictures; (3) into likes and dislikes; (4) into the production of concepts. These methods seem perhaps rudimentary as yet, and Kraepelin has done little with them, but they certainly are very suggestive.

In the last chapter Kraepelin speaks of the possible value which treatment and prophylaxis might draw from experiments as they have been indicated. An insight can be gotten, for example, into the question why maniacal patients are better treated by baths and rest than by leaving them to their constant desire to move about. We can get a knowledge of the psychical action of the drugs we use; and with regard to the prevention of insanity, we have now, through Kraepelin's studies, a better insight into the action of alcohol on mental processes, which it never stimulates, but always paralyzes. That steps can further be made toward a proper psychical hygiene is also evident from what has been said.

This review has taken much space, yet numerous important and interesting points could not be touched at all, from which the reader is recommended to make a careful study of the original. He will find a great number of facts which have been elucidated by the studies of Kraepelin and his pupils, and many valuable suggestions; and on every page he will gain the impression that these latter are not based upon vague speculations, but upon a long experience in practical, well-directed work in the laboratory. But as was said, the original is itself only an outline of the study which Kraepelin inaugurated—a study the details of which are partly published in former articles, and partly are to appear in the *Psychologische Arbeiten*, which, therefore, I also wish to recommend to the interest of the American psychiatrist.

CHRONIC DELUSIONAL INSANITY OF SYSTEMATIC EVOLUTION.

(LE DÉLIRE CHRONIQUE À ÉVOLUTION SYSTÉMATIQUE.)

CONTINUED FROM OCTOBER NUMBER.

LECTURE IX.

SUMMARY.—The insanities of the degenerate may manifest themselves at any of the periods of life, even in infancy; their mode of onset is sometimes abrupt and sometimes insidious—Symptoms of these insanities; frequent variation in their forms—The possible coincidence of some incompatible forms of delusion—Absence of systematic evolution—The hallucinatory forms of psychosis are not based on insane interpretations; they persist without transformation—The low mental level of the patient is disclosed by the weak form of the insanity.

In the preceding chapter we described as concisely as possible the insanity of the persecuted persecutors. Their special methods and tactics will serve to distinguish them from other forms of the degenerate psychoses as well as from chronic progressive insanity. If we examine the clinical basis of this distinction, which, although somewhat slender in some particulars, is well worthy of the attention of the physician, not only for prognostic but also diagnostic purposes, it will be necessary to review successively the various points of difference that separate these great groups. We have already seen that a knowledge of the history of the case furnishes us with useful indications, which not only throw light on the future of the patient, but also explain the existing phenomena. The history of a degenerate patient, as we know, differs from that of a person afflicted with chronic progressive insanity in this respect, that in the latter there is no history of hereditary predisposition, but instead, the development of a long-lying latent predisposition. We shall not here again refer to the existence in the degenerate of psychical and physical stigmata. The unstable and badly-balanced state of their moral nature renders them an easy prey to insanity and to a particular type of mental disease. If we compare chronic progressive insanity with the psychosis of the degenerate, we shall see that they differ as to the age at which the insanity appears, as to its mode of onset, its symptoms, its evolution, and its termination. Chronic progressive insanity commences in adult age; the psychosis of the degenerate is not limited to any age, and may even commence in infancy. We have seen that there is a long period of incubation in chronic progressive insanity, which forms a strong contrast with the previous life of the subject; the onset of the insanity in the degenerate may be either gradual or sudden.

When the insanity appears abruptly, it differs entirely from the mental manifestations during the incubation period in chronic progressive insanity. The subject of the former experiences none of the hesitancy, uncertainty, and timidity which characterizes the first stages of the latter disease. The inherited special aptitude of the degenerate enable them in a few days to systematize their insane ideas without the long probation period required by the patient laboring under chronic progressive insanity, and they quickly adapt themselves to the most intense hallucinatory disorders and essential changes in personality.

They may, moreover, express at the very beginning those ambitious ideas which only begin in the subject of progressive insanity after the cerebral resistance has been weakened by the course of a psychosis of long standing. In this way is partially explained the frequently fugitive and transitory character of the psychosis of the degenerate. They may be termed fleeting attacks of insanity, ephemeral and transitory, which leave very little trace behind, and do not depend upon a pathological basis slowly developed, year by year, as in progressive insanity. In other cases, on the other hand, the insanity is slowly developed in an insidious manner, it may be from infancy, whether an ambitious, mystic mania or a persecution mania. Besides the manner of its development there are other characteristics of the psychosis of the degenerate which, in this connection, demand our attention. There is, first, the frequently varying form of insanity, which may be described as proteiform; and, second, the possible coexistence in the same subject of many different kinds of delusion. It is very common, for instance, to find ideas of grandeur coexisting with ideas of persecution, and these again may be associated in the same individual with mystic, erotic, or hypochondriac delusions, and all these different delusions may exist associated with a mental condition, either of exaltation or depression. These aberrant mental manifestations follow each other, reappear and disappear without any determinable method of succession—the patient who was yesterday ambitious may be to-day persecuted, and to-morrow may be hypochondriac. The contrast between the irregularity and polymorphism of this psychosis and the orderly, methodical evolution of progressive insanity is sufficiently apparent. Finally the degenerate patient may manifest various impulses and obsessions, the episodic syndromata of his unstable moral nature.

We have seen how important a part hallucinations play in the

course and systematization of progressive insanity. In the degenerate manias of persecution and of grandeur may frequently be met with that require to be carefully distinguished from chronic progressive insanity. In the former the patients do not manifest any sensorial disorders, while in the latter, on account of the intensity and multiplicity of the hallucinatory phenomena, consciousness frequently becomes confused and obscured. In certain cases of progressive insanity intellectual disorder of a non-hallucinatory character ushers in the insanity, but sooner or later sensory disturbances manifest themselves, and hallucinations are always the most important agents in the genesis and systematization of the delusions. In a large proportion of degenerate cases, on the other hand, hallucinations are merely incidental, while in others the most careful observation fails to detect their presence. In these non-hallucinatory cases the insanity is purely intellectual, and in such cases the insanity may manifest itself in infancy, or at such an early age as eight or ten years (*originäre Verrücktheit* of the Germans), thus placing the hereditary nature of the disease beyond all doubt. The delusions are deeply rooted and firmly fixed; they prevail beyond all proportion in the patient's mind, and may persist without alteration during his whole life. Regarded relatively to their origin, such delusions may be considered as besetting ideas firmly established without the agency of antecedent hallucinations. In other patients of the same class the delusions may exclusively depend upon a multiplicity of illusions and false interpretations. Illusions of this kind are so vigorous that they can, without the intervention of sensory disorders, people the mind of the subject with insane conceptions. Again we may add that hallucinations may appear in some of these patients as secondary and unimportant incidents. The accessory action of such hallucinatory phenomena may, however, sometimes render diagnosis uncertain until examination reveals such a sufficient basis for the insanity as a dominant idea or an insane illusion. It is astonishing often to observe how insignificant events, such as a fortuitous coincidence or an ambiguous phrase or word, have, during the examination of such patients, been sufficient to make the insanity manifest itself. A little girl, whose father was in the habit of calling her a "little queen," based upon that phrase an ambitious insanity; and another child, whose mother, when punishing her, used the expression, "She is not my daughter; she was changed by her nurse," based upon these words a systematized insanity. To understand fully the great disproportion which

exists between cause and effect in such cases, we must recognize what is fully borne out by examination—the existence in these patients of a brain for a long time prepared for the inception of insanity from psychopathic inheritance, and which requires only a fitting stimulus to crystallize the most diverse delusions. The youthful susceptible brain is quickly and deeply impressed with the most erroneous conceptions; such conceptions are confirmed by the occurrence daily of insane illusions and by constantly recurring proofs. Moreover, a much exercised memory, together with weakened reasoning powers, is one of the best conditions for retaining and defending such insane convictions. Proofs upon proofs of his erroneous beliefs easily accumulate, and the subject is always prepared with a ready answer to defend his position by giving precise dates, propounding dilemmas and conundrums to his friends, and magnifying the most insignificant facts in order to use them as adjuncts and proofs of his accuracy. At other times, when it is attempted openly to convince the patient of his error, he either smiles superciliously and ironically, or sulks, as if his position were based on incontestible fact. Occasionally such degenerate persons, laboring under systematized manias of ambition or persecution, resemble the persecuted persecutors in their mode of behavior—those whom their insane delusions and illusions point to as enemies they pursue with characteristic tenacity and animosity. In St. Anne's Asylum we studied the case of a woman, thirty years of age, who has been affected from infancy with ambitious ideas and delusions of persecution. She was convinced that her father was a bishop, and that those whose name she had were not her relatives, but had murdered her true father. She is maintained in her beliefs by the constant occurrence of insane interpretations, and the strength of her convictions and the mode of her behavior correspond exactly to our description of the persecuted persecutors. Throughout her life she consistently hated her parents, and at last, exasperated by the inattention of justice to her demands, she shot her father with a revolver. A minute examination of the nature of her insanity revealed nothing more than the presence of an insane delusion controlling an ill-balanced brain, which, increasing in strength by the accumulation of erroneous proofs for years previously, had, without the intervention of any hallucination, originated a train of insane interpretations with the result we have stated. But the degenerate are also subject to the incidence of acute hallucinations with delusions of persecution transiently relieved by the presence

of ambitious ideas. There is no trace of systematization of the insanity in such cases, but, on the contrary, a secondary condition of extreme confusion of ideas, caused by the invasion of consciousness by innumerable hallucinations.

We shall record further on the case of an acute attack of this nature occurring in a degenerate patient during the progress of persecution mania, and which was rapidly cured. We shall also show that in many instances degenerate cases are apt to be confounded with chronic progressive insanity on account of a superficial resemblance, but in most cases such a mistake is impossible because of the intellectual defects, the childish, disordered nature of the insanity, the inferior mental condition and mental weakness which characterize the degenerate. Sometimes the patient may seem to be no longer convinced of the truth of his delusions. He may hesitate and doubt in a way that the subject of progressive insanity never does. The hereditary defects, the lowered mental level, the motor disorders, the physical stigmata, the general character of the insanity, all point to nervous degeneration. It is impossible to confound the coördinate, logically defined delusions of chronic progressive insanity with the absurd lucubrations of the mentally infirm.

Again, there exist other cases of degeneracy which, in the existing state of their insanity, may, without any reference to the beginning or evolution of the affection, assume a resemblance to the second or the third stage of progressive insanity. Indeed it is seldom that insanity in the degenerate makes its appearance with that complete systematization and deep conviction of the truth of its delusions that in progressive insanity is developed in the course of years. As M. Briand has observed, the manias of persecution and grandeur in the degenerate, compared with the same forms in chronic progressive insanity, may be regarded as analogous to the manner in which hysteria simulates completely the most typical characteristics of cerebral or spinal affections. We had recently under our care a young woman twenty-three years of age, who, for two days, had been affected with the sensation of whistling in the ears. She rapidly came under the influence of hallucinations. She declared that somebody reported aloud all her actions. When she undressed preparatory to going to bed she heard a voice saying, "Look, she is changing her chemise." Occasionally she heard three distinct voices, one of which defended her, another ordered her to do repugnant actions, such as eating pieces of coal or stealing. Sometimes a voice threatened to kill her. Without the per-

mission of "Madame la Somnambule," she is unable to talk or to do anything, and refers to this person any question that is put to her. She declares that she is able to "speak with her heart." The voice is an internal one (motor verbal hallucination). This young patient also had distinct hallucinations of sight (no alcoholism), painful hallucinations of smell, taste, and disorders of general sensibility. Very soon there appeared voices of a consolatory nature which praised her good heart and promised her rewards. In less than three months from the date of her admission this patient left the hospital completely cured, without any trace of hallucinatory phenomena remaining. This case had shown for some time a distinct resemblance to the second period of chronic progressive insanity, but the youth of the patient (twenty-three years), the abrupt commencement of the insanity, its rapid evolution, ending in complete cure, are so many distinct points of difference, which completely justify the classification of the case among the insanities of the degenerate with which it is associated by important clinical characters.

We have seen an example of this form of abrupt insanity with rapid evolution in a degenerate subject, in whom the mania of persecution disappeared after two months. He was a man of a badly balanced emotional turn of mind, but at the same time intelligent and well educated. One of his aunts had been insane. Succeeding a slight mental disturbance there occurred a transient insanity, with delusions of persecution and hallucinations of hearing. Everywhere he went he heard abusive voices. Through holes bored in the ceiling of his bedroom they insulted him at night. He imagined that there were people in the next room waiting to arrest him, that he was hypnotized, that his thoughts were being read, that he was followed by spies who believed him guilty of robbing a church-door collection box. He believed that chloroform was sprinkled over him, that magnetic influences were directed against him, through the influence of which he was made to perceive incredible monsters painted in red, white, and blue colors. From time to time he heard sympathetic voices which assured him that he was made to suffer too severely; that he was being defamed, and that he would probably receive as much as 2,000 or 3,000 francs as damages. After a short remission, extending over some days, the hallucinatory disorder increased and became general, and thus established that profound disorder of consciousness with a multiplicity of delusions which, according to Schüle, Krafft-Ebing, and Rosenbach,

always characterizes the acute hallucinatory forms of insanity. The patient gradually began to look pale and wearied, and to show a profoundly altered expression. He declared that he was constantly hypnotized during the night; that he feared his head would fall off, and incessantly cried, whilst staring at a corner of his cell, "Down with the hypnotizer and with the phantasmagoria!" He was alternately depressed with hypochondriacal ideas and excited, when he manifested twitching of the face and abrupt extension of the limbs. Sometimes he declared he was dying and at other times he would suddenly burst out laughing. He then became affected by hallucinations of sight of a pleasant nature. He would stare in rapture at the sun, and immediately afterward become melancholic. We observed in this patient systematized delusions of persecution, hallucinations, and some ambitious delusions corresponding to what is found in chronic progressive insanity. But in this case we have to do with a manifestly unstable individual, the beginning of whose affection was abrupt and in whom there was no period of incubation similar to that occurring in progressive insanity. In less than two months he was quite well and merely laughed when reminded of his insanity. Upon the whole, in this case, as in the preceding one, the hereditary and personal antecedents, the commencement and the termination of the insanity, all show, notwithstanding some superficially similar symptoms, that the form of mental affection is sharply distinguished from chronic progressive insanity. But in all these cases what chiefly distinguishes the insanity of the degenerate from other forms of insanity is its irregularity, which is in striking contrast to the regular progress and consistent evolution of the psychosis we are studying. Sometimes bursting out without any previous incubation, occasionally but rarely arising subsequent to some old-standing neurotic tendencies, the insanity of the degenerate may either end abruptly in dementia or it may rapidly disappear altogether, or, after a longer or shorter term of remission, it may reappear either in its original form or wearing an entirely different aspect. Chronic progressive insanity, on the other hand, progresses slowly but fatally, becomes transformed from day to day, is always getting more deeply rooted in the consciousness of the patient and is without any hope of cure, or even of a comparatively durable remission. The possible or probable curability of the psychosis of the degenerate is not by any means the least important feature of distinction between these two clinical varieties of mental affection. Sigowitz (quoted by Griesinger) recorded the

case of a patient thirty years of age, afflicted with a systematized megalomania, who imagined himself to be a colonel and general adjutant, a champion billiard player and a skilled horseman, who recovered from his affection within a period of a few months. We studied the case of a young man twenty-five years of age, with systematized delusions of grandeur and hallucinations, and who manifested all the symptoms of a patient in the third stage of progressive mania. From the very commencement of his insanity he was ambitious. He declared himself to be the son of a prince and of an emperor. He haughtily received his mother, of whom he spoke as his adopted mother. After two years his insanity suddenly ended, the patient recovered and was restored to his family. As was ascertained from his personal antecedents, which showed that he had a sullen temper, eccentricities of manner and mental instability, as well as from his hereditary antecedents, which revealed the existence of insanity both in the paternal and maternal line, this patient, from the very commencement, had ambitious delusions and never passed through the persecuted stage. Nothing in his case suggested a resemblance to the fatal evolution of progressive insanity. We can not better illustrate the distinction between progressive insanity and persecution mania in the degenerate than by the history of communicated insanity. (*Delire double.*)

The facts we mention prove that there are forms simulating progressive insanity with only a superficial resemblance to that disease. We have seen the slow incubation, the progressive course, the systematization of progressive insanity, as well as the lucid mental condition of the patient, and the probability of his infecting others, when it is explained that such an affection may, during the period of incubation or persecution, be communicated to those living intimately with the patient and sharing in his anxieties, who, by insensible gradation, assimilate his delusions of persecution, and finally end by helping to elaborate his insane conceptions. It is not necessary in such cases, where the symptoms of progressive insanity are communicated to a second person, when the one helps the other in slowly building up the edifice of the insanity, to suppose the existence of a double progressive insanity. In order to assimilate the insane conceptions of a second person one must be possessed of certain special attributes of mind which do not offer any strong resistance to such ideas. In such instances we generally find associated together an active intelligence which has created the insane scaffolding, and a passive, generally weak-minded

individual that has submitted to and repeated the ideas of the other like an echo.

There need be no collaboration between two such patients, but a servile copy by the second of the mental aberrations of the first. In our clinical lectures we have recorded the case where a mother, the subject of chronic progressive mania of three years' standing, communicated her insane conceptions to her daughter, a girl of comparatively feeble mental development. It should be added that while the psychosis of the mother was incurable, we found that the ideas of persecution imposed upon the daughter by the superior personality of the former rapidly vanished when the two patients were separated.

LECTURE X.

SUMMARY.—Some of the insanities of the degenerate may symptomatically simulate progressive insanity, but are distinguished from it by their beginning, evolution, and the different prognosis—The irregularity of the evolution of such psychoses, and the frequency with which recoveries take place, is in distinct contrast to the unvarying course of progressive insanity—*Delire double* an illustration of the difference referred to—Objections to the separate classification of chronic progressive insanity—The character of the cases justify their separation from other forms of insanity.

The fundamental distinctions we have endeavored to establish between the insanity of the degenerate and progressive insanity were eloquently defended in the discussions that followed the remarkable paper of M. P. Garnier in the Medico-Psychological Society. M. Camuset fully homologated our position and came to the conclusion "that there exists a nosological type of insanity composed of several analogous forms of psychosis having an invariable onset and evolution and confined to persons of normal development and free from mental affection up to the time of the commencement of their insanity." He proposed the term "regular chronic insanity" to distinguish this insanity from the distinct forms which occur in the degenerate. M. Marandon de Montiyel, while taking exception to certain points of secondary importance, fully agreed in believing that progressive insanity is not only in accordance with the facts of true clinical research, but that it also coincides with the known laws of normal and morbid psychology. M. Falret, in an interesting paper read at the Medico-Psychological Society, conceded the truth of the distinction drawn between progressive insanity and the insanities of the degenerate, and accepted on the whole the description given of this type of mental affection, but expressed his divergence on some points from our opinions. He divided the course of the disease into three periods: 1. A period of incubation. 2. A period characterized by auditory hallucinations and systematized delusions of persecution. 3. A period in which there occur multiple hallucinations, disorders of general sensibility, and stereotyped delusions of persecution. He considers that the metamorphosis of the character of the insanity from ideas of persecution to those of ambition is not constant, and that the latter ideas are merely a superadded form of insanity. Finally, he asserted that the period of dementia can not be properly regarded as forming a part of this insanity.

Those who deny the existence of this form of insanity point out that there are cases of persecutory mania which do not develop ambitious ideas, but a distinction has to be made between the subjects of progressive insanity and the hereditarily degenerate in whom delusions of persecution appear without any period of incubation. But if we admit the validity of this objection for the sake of argument it in no way affects our position. We have seen how slowly the disease progresses; that it commences in adult age; that it requires for its complete evolution a period of twenty or thirty years or more. It may often happen that the subject of insanity dies before the appearance of the ambitious period, or again the period of persecution may be a protracted one. There is no immutable pathological rule which absolutely limits the duration of the periods of any disease. It has not materially affected our conception of locomotor ataxia, although it has been shown that the disease is sometimes arrested in its fatal course, and that it may last for fifteen or twenty years without manifesting certain symptoms which were at one time regarded as essential to its correct diagnosis.

Intermittent intervals of sanity in the course of progressive insanity are less frequent than is supposed. The approach of the ambitious period may lead the patient to dissimulate and prevent us from observing the transformation of the disease. It is often by chance that we are enabled to perceive it. M. Doutrebent says we should always remember the observation of M. Falret, who acknowledged that he had lived for years beside patients laboring under chronic progressive insanity, who had passed into the ambitious stage without his being aware of it. This avowal on the part of such a careful and scientific observer ought to have weight with those who lightly use arguments against the existence of such a disease. At the same discussion many examples were brought forward which were intended to demonstrate the persistence of cases of persecution mania for many years without the development of any ambitious ideas, but unfortunately for some of these examples it happened that the transformation of the insanity really took place in them and had been accurately observed by other physicians. Further, it should be mentioned that M. Falret, who, in his first paper, fixed the proportion of cases of progressive mania passing through the ambitious period at about a third of the whole, declared in a later communication that such a proportion was merely approximate; that ambitious ideas, latent or concealed, frequently exist,

and that this fact may greatly modify the proportion formerly mentioned. This fact alone helps to establish the fact that progressive insanity may be more common than was formerly believed, and that it often passes unrecognized, even by the most careful observers. But it is urged again that there are cases in which ambitious mania has broken out suddenly, or has manifested itself from infancy, or has occurred periodically without a trace of pre-existing delusions of persecution. Those abrupt cases of megalomania are not included in progressive insanity, the chief purpose of the classification of which is to separate a disease characterized by a uniform evolution from affections without such a feature. The former cases belong to the class of the degenerate and in no way affect the validity of our thesis. It is further urged that persecution mania may be recovered from without showing any transient ambitious symptoms, which fact points to the relation such cases bear to the degenerate and to their separation from progressive mania. With regard to the final period of progressive insanity we need only refer the reader to the opinions expressed by Griesinger, Baillarger, Schüle, and our own previous statements, and finally to an examination of the patients themselves. M. Dagonet, who believes that megalomania is a special morbid entity, related cases in which the disease did not end in dementia. But a description of such cases enables us to perceive that they do not belong to the class of progressive insanity, but to that of the degenerate. One of his cases, a woman, for twenty years declared that she was an imperial princess, and another patient for twenty years had, every second or third year, an accession of ambitious mania. Such cases are, of course, degenerate. They show none of the periods of progressive insanity, and it is not wonderful that they did not become demented. Cases of this kind render it necessary to distinguish carefully in cases of mixed megalomania: 1st, cases of megalomania in progressive insanity which, after a period of persecution, become demented; and 2d, megalomania in the degenerate in whom the origin, march, and prognosis of the insanity are entirely different.

Many authors, including M. Falret, expressed grave doubts as to the utility of collecting various dissimilar clinical species of mental affection under the title of progressive insanity. The preceding description of this psychosis is, however, sufficiently exclusive, and incompatible forms of disease connected with persecution mania and megalomania have been eliminated. It was suggested that anxious melancholia and the pseudo-megalomania which sometimes

succeeds it were apt to be mistaken for progressive insanity. But it is sufficient to guard against any such error simply to bear in mind the four distinct periods of chronic progressive insanity.

In concluding this chapter it is desirable to briefly recapitulate the principal features that distinguish progressive insanity from other psychoses. For the sake of clearness we shall contrast the state of the patient in each period of the affection. In the stage of melancholia the patient might be mistaken for a case of hypochondria or melancholy. The latter, however, are not suspicious, nor do they falsely interpret the acts and gestures of those about them; they have a feeling of ill-being, for which they consider themselves responsible; the melancholic especially is self-accusative. The subject of progressive insanity, on the other hand, is particularly curious as to the origin of his new sensations, and attributes them to external intervention. The indications afforded by the age of the patient (adult age), the absence or very faint trace of hereditary taint in progressive insanity, the previously healthy mental condition, will be a sufficient guide in diagnosis. It must be borne in mind with reference to the period of persecution that any form of persecution mania in which there is hallucinations can not be looked upon as forming a stage of progressive insanity. Reasoning maniacs, persecuted persecutors, and persecution maniacs with systematized delusions must be excluded. There must also be eliminated the non-hallucinatory forms of persecution mania, clinical forms characterized by marked sensory disorders, which induce a more or less complete mental obfuscation of consciousness, and many other melancholic conditions. Acute, short, hallucinatory attacks and abrupt insanities appearing in predisposed patients manifest no systematization and are generally curable. The same may be said of the toxic insanities. It is only after a prolonged study of the disease that an accurate diagnostic facility is acquired for distinguishing accurately the persecution mania of the degenerate, which may, for a time, symptomatically simulate the second period of progressive insanity. The hereditary history of the degenerate, their psychical and physical stigmata, the comparatively early age at which the psychosis appears, the absence of an incubation period, the transient co-existence of other delusions, such as ambitious, hypochondriacal, mystic, and erotic ideas, are sufficient to distinguish it from progressive insanity. The two last periods of this disease present no difficulty in diagnosis. In the ambitious stage the knowledge of the existence of a preceding phase of per-

secution will throw light on the nature of the case and prevent its confusion on the one hand with megalomania, without hallucinations or evolution and of a fixed nature, and on the other hand with the generally polymorphous insanity of the degenerate.

LECTURE XI.

SUMMARY.—Medico-legal aspects—Criminal acts committed by patients—Concealment of delusions and perfect lucidity of mind exhibited by the subjects—The absolute irresponsibility of the cases—The duty of the physician toward cases of progressive insanity—Indications for treatment—Sequestration—Conclusion.

We have already seen, when examining the various modes of behavior of those afflicted with progressive insanity, how frequently such persons endeavor to end their torments by the commission of acts of violence. When sensory disorders, by their intensity and long continuance, rendered the existence of such cases intolerable to themselves, their aggressive actions were apt to be attended with fatal consequences. We have sketched the development that took place in the patients' behavior, at first manifested by attempts to elude their persecutors, acting only on the defensive and carrying their grievances to the notice of public authorities, but finally exhausted by useless endeavors, they seek to avert and frustrate their foes by taking the law into their own hands and committing some criminal offense. Such acts require to be carefully considered from a medico-legal point of view. The pathological impulses of the accused must be taken into consideration, and the relation of the act to the insanity and to the predominant sensory disorders must be carefully observed.

It is well-known that such patients can for a lengthy period retain the logical faculty. They can, with much apparent plausibility, explain their delusions, and, in spite of very prominent hallucinations, they present a mental condition of perfect lucidity. The care with which they often conceal delusions, even when these delusions have for a long time been systematized, and their reticence when they wish to hide their hallucinations, which they regard as symptoms of insanity, often cause the bystanders to look upon the patients as sane and responsible when he has committed some act of violence or attempted homicide.

Tardieu has remarked that it is extremely difficult for experts engaged in cases of insanity of this description to impress upon judicial authorities those elementary clinical facts which are of the greatest consequence in their bearing on responsibility. On this account some lamentable miscarriages of justice have occurred, and many persons whose patent insanity should have protected them were led to execution. Notwithstanding the dissimulation of the

patient it should always be possible for the physician to succeed in irrefutably demonstrating the morbid character of the actions of such patients. It may generally be proved that a person whose intelligence appears unimpaired, and who, up to the very last, performed his usual work, may be the subject of hallucinations and of systematized delusions of long standing. It may be possible to piece together the previous history of the insanity of the patient, the occurrence of the period of persecution after a preceding stage of incubation, and the slow and silent development of the affection. It is important to throw light upon the relation existing between the criminal act and the hallucinatory phenomena, from which ascertained data the nature of the affection may be diagnosed and the irresponsibility of the patient confirmed. Premeditation can not be disproved in such cases; for the most part it is undeniably apparent; nor does the patient attempt to palliate his crime, but, on the contrary, prefers to justify it logically. Yet, notwithstanding all this, irresponsibility must be urged. The mental individuality of the patient is completely altered in progressive insanity by the delusions of persecution and the painful character of the sensory disorders, and, in addition, the hallucinations themselves provoke and incite to active aggression. While the subject is predisposed by the nature of the mental affection, by his preoccupied thoughts, and by a continual state of mental and bodily fear, he is also directly stimulated to action by the character of the hallucinations. Legrand du Saulle's view was that in slight offenses the patient need not be considered as having acted altogether under the influence of his insanity, but that certain of his actions might be regarded as voluntary, and that consequently he might, with certain reservations, be held responsible for these actions, even though they were based upon his ordinary delusions. Such a view is inapplicable to progressive insanity, but it may be mentioned that Legrand du Saulle included in his mania of persecution many different forms of mental affection. We can not do better than recapitulate one or two of Tardieu's very apropos remarks on this question: "Above all, the expert must endeavor to ascertain the predominant delusions which govern the patient and offer an explanation of their bearing on the acts. A very little observation will enable him to perceive that in no sense of the term are there present in those patients either affections of the will power or homicidal impulsions. On the contrary, it will be found that the reasoning powers are endowed with persistent and singular strength, and although the

reasoning faculties are led by the influence of illusions of the senses into trains of thought, intermingled with the most absurd delusions, yet that there are produced side by side sensible and improbable deductions, which may end in violent and regrettable actions. Each case of this insanity shows irresponsibility in different degrees, and it is the duty of the physician, acting with the certain approbation of his own conscience, to do all in his power to shield them from sentences directed, not at criminals, but at pitiable sufferers."

In the preceding chapters we insisted on the inexorable, hopeless, and fatal development of progressive insanity. The treatment of such a disease is purely symptomatic, and there is, of course, no special form of medication. First of all, nothing must be done which can injuriously affect the patient's physical health; such therapeutic remedies as depletion, purgatives, emetics, and the systematic use of shower-baths tend to debilitate the patient and feed his diseased fancies, and should be avoided. Trephining has been boldly employed by a foreign physician, who has also recommended the excision of the cortical auditory centers.

The method of intimidation energetically advocated and practiced by Leuret has been totally abandoned. The patient was placed in a shower-bath and detained there until he retracted a belief in his delusions, which retraction, it may be safely inferred, though drawn from the lips, was insincere. Hifflesheim's method was at one time used in the Salpêtrière for the treatment of hallucinations. It consisted in the application to the head of a series of small galvanic piles formed into the shape of a crown, the poles of which were applied to the ears, and in this way a weak galvanic current passed through the brain. The system was attended with no satisfactory results. Moreau de Tours proposed datura stramonium or cannabis indica for the treatment of sensory disorders. As both these drugs are themselves capable of producing hallucinations this may be looked upon as an application of the *similia similibus curantur* method, but their administration was equally unsuccessful, and when we remember that alcohol has the power of producing many hallucinations, and that it aggravates those of progressive insanity, we need not wonder at the result. Arsenic was used by Lisle, but also without success.

Although there is no treatment which can possibly relieve such a deep-rooted psychosis as progressive insanity, there are various indications for the treatment of symptoms in individual cases in the

different periods of the affection. Tonics, iron, and hydro-therapeutic applications may be advantageously employed whenever the patient requires them. It is essential to prescribe a dietetic regimen. Such patients, especially when in the stage of persecution, with delusions of poisoning, are often badly and irregularly fed, and frequently eat indigestible kinds of food, from which arise digestive disorders and exacerbations of their insane conceptions. The meals must be carefully regulated, the state of the bowels attended to; indigestible dishes, spiced sauces, alcohol, and coffee must be forbidden, and exercise should be ordered to be taken after each meal. If the patient takes insufficient food, or refuses it altogether, the œsophageal tube should be used without hesitation. Occasionally during the course of the disease a condition of mental excitement, with increase in the activity of the sensory disorders and of the insanity, manifests itself. For the treatment of this excitement the bromides and simple or alkaline tepid baths may be advantageously employed. Sleeplessness should be treated with chloral. Remissions in the sensory disorders and in the insanity are frequently brought about by change of life, and by the moving about of the patient from place to place. It is of primary importance that the physician, when consulted regarding a patient who has become violent in his behavior, and has threatened the imaginary authors of his persecution, recommend immediate seclusion, for there is generally but one short step between the utterance of the threat and the action that follows. Not only is sequestration followed by a transient improvement in the patient's condition, but it is also advantageous in sheltering the patient from external causes of irritation, in checking his aggressive actions, and in insuring the public safety.

Before concluding this monograph we shall briefly recapitulate the principal points of interest in the study of the disease. The fact that there are patients who slowly pass through the four successive periods of anxiety, persecution, grandeur, and dementia is beyond refutation. In order to diagnose correctly such a constantly progressing form of mental disease the physician must observe carefully, not only the various symptoms presented by the patient, but also and specially the evolution of the disease. Many so-called varieties of mental disease, such as demonopathy, mystical mania, megalomania, persecution mania, theomania, are only so many symptomatic stages or successive steps of one affection, which ought not to be confounded with other psychoses. It is of little

real benefit to recognize clinically that a patient is a theomaniac or a megalomaniac, or to know that he calls himself a God or a king, or the president of a republic. The essential thing is to ascertain the history of the disease and to discover whether the existing ideas of grandeur were or were not preceded by a period of persecution. When a patient with delusions of grandeur is diagnosed by the physician to be laboring under progressive insanity his ultimate fate is certain. But if, on the contrary, his delusions of ambition have not been preceded by a period of depression and persecution, and if he belongs to the class of the degenerate, the prognosis is much less grave. We may, therefore, safely conclude from our collected and published cases that there do not exist such isolated pathological affections of the mind as megalomania, religious mania, or persecution mania, but one definite psychosis characterized by four successive stages, viz., chronic progressive insanity with systematic evolution.

LECTURE XII—APPENDIX.

We have thought it might be interesting to add short notes of six out of the thirty-two cases presented by Dr. Magnan in his clinical lectures, to illustrate the subject of progressive insanity.

Case I, first and second periods; incubation and confirmed persecution; age sixty-four years; duration of disease thirty-four years. No hereditary antecedents. His numerous family relations were all healthy. Personal antecedents are as follows: He lived a regular life in his youth and was an apt pupil. At the age of sixteen he became clerk to a bailiff in Paris, but on account of the riots in 1848 he was thrown out of work and went back to the country. In 1854 he came back to Paris and got married. At first his wife noticed nothing unusual about him, but in 1857 she observed that he became suspicious in his manner towards his friends and neighbors. He became jealous of his wife, accused her of being faithless, and created scenes in his own house. In 1860 he took notions about magnetism and complained of being acted on by electricity. He said that they used foul language by means of a magnetic machine, but he did not know who "they" were. In 1870 the events of the war and of the commune spurred on his insanity. He would not sleep in the same bed with his wife, whom he declared to be a petroleuse. He avoided contact with her, and to protect himself from electricity he wore magnetic stays, a Pulvermacher belt, and placed insulating plates of glass under the legs of his bed. In 1871 he complained to the police and was placed in confinement. His sequestration improved his condition and he was released, but immediately afterward imagined that he was being poisoned, as a proof of which he carried his excrement in paper to the police office. He stated that his enemies were the communards; that they had killed his father and plotted against the republic, but on account of the manner in which they have tortured him, some "International people" have tried to remedy the evil and to protect him. They proposed to allow him £3,000. There are millions hidden at Geneva and London, and he is sure to be paid (this is the beginning of the ambitious period). He is still very reticent, but when pressed he admits his condition.

Case II, auditory and genital hallucinations; vigorous actions; vague accusations, becoming gradually more precise until the name of the persecutor is mentioned. Madame I., thirty years of age; her

father was paralyzed at the age of fifty-five; a sister is melancholic. She says that for three and a half years people have been playing tricks upon her. Her food has been spoiled and people have come into her room to publish false marriage banns. Gradually hallucinations and disorders of sensibility in the genital regions were added. Her neighbors and the concierge gave her a powder which threw her into a state of lethargy, and during her sleep they abuse her in the most shameless manner. They introduce spoons, knives, and forks into her vagina. They administer poisoned clysters, sew up her anus and then tear it open again and introduce sticks into her rectum. While she is out, they go into her room and perform lewd gestures and actions in front of her photograph. She is constantly watched and spied upon and made a fool of. During the night they enter her room and cut her lips. Finally, exasperated by these persecutions, she fell to abusing the people in the house, and ran after one of her neighbors with a knife. This patient is a virgin.

Case III, of twenty years' duration. After passing through the period of incubation, she has been ten years in the third stage. She accounts for the persecutions she has undergone by the fact that she is heiress to an inheritance of thirty million francs. This patient is sixty-two years of age. Her mother died of paralysis. Twenty years ago she observed that she was the victim of jealousy and gossiping. Since her arrival in Paris twelve years ago, a vicar, M. C., with Jesuits, women and children, insults her everywhere she goes. This vicar when preaching made allusions to her and incited her to give herself up to him. He stated that he would dispossess her of her inheritance and of her palace on the banks of the canal in Venice if she refused to yield to him, but if she permitted him to avail himself of her, he would make her a great personage. He began to poison her mother, her male and female cousins, and at last, not having succeeded in mastering her, he had her confined in an asylum. He enjoys an income from the thirty millions, and not content with despoiling her, he watches over her and spares her no humiliation. Occasionally he comes to see her and to insult her. The conduct of this vicar with the nuns of St. Vincent de Paul is scandalous. As for her, she will not yield; she sticks to her rights. This is manifest by the public declarations the vicar makes in his sermons.

Case IV.—Val. L., forty-six years of age. Shortly after her husband's death, in 1872, the patient became gloomy, depressed, and anxious. She lives alone. She thinks that people mean to do her

injury; that they abuse her. She refuses to work, because people who bear her ill-will insult her in the streets. She hears people say about her, "There is Mr. A.'s sweetheart; there is the doll of the big Auvergnat." Freemasons, witches, and inquisitions are busily at work upon her. A fellow, called B., attracted her and played tricks upon her. As her insanity became systematized the patient began to use a special vocabulary. She says that she is seized by witchcraft; that she undergoes the war of the invisible; that they have struck her thoughts and made her speak. Disorders of sensibility are also present. She declares that her heart is in their keeping, and that they work inside of her to destroy her; that vampires gnaw and devour her inside and suck her blood. The approach of the ambitious period was heralded by voices which shouted to her for the last three and a half years that she was the granddaughter of Louis Philippe; that she is to marry Sigismund d' Apremins. She also has developed a double personality. The empress Eugenie has entered her body, lives as she does, which prevents her marriage with Sigismund. The empress is at the head of the invisible army. The patient maintains a haughty attitude, and refuses to shake hands. When at home she kept her door locked and never went out.

Case V.—Madame V. C., forty-three years old, a lacemaker, was of illegitimate birth, with no ascertained hereditary history. For six years she had been depressed and preoccupied. She would not go outside, because she thought people on the street would injure her. She heard them use obscene language to her. Later on, disorders of general sensibility appeared. Her delusions became more systematized. She declared that tools as long as bowels were introduced into her body; that poisoned iron wires had got into her head, and that the body of another woman was inside her own body. She gets swollen and hard, and on one occasion struck her belly with a hammer in order to break the unfortunate visitor's head. She affirmed that sometimes the woman inside her body enjoyed sexual relations with her husband, while she herself was usually inert and indifferent at these times. When her conjugal relations were normal she knew that the other woman was not in her body. Occasionally she had sexual relations with a man she felt but did not see. Even when she remained sitting in her chair she felt the same sensations. She feels insects creeping under her skin and sucking her juices. Occasionally she had disagreeable hallucinations of smell. Later, she said she belonged to a great family,

and did not want to work. She heard voices telling her that she had won the capital prize.

Case VI.—Female, seventy-one years old; little is known of her history. Her mother was married twice, and separated from both her husbands. The patient was fifteen times in the Salpêtrière. Her disease extends back to the year 1840, when she was twenty-seven years old. She seems to have had, toward the end of the reign of Charles X, relations with some great personage of the court. Then she happened to be mixed up with the events of 1870, which had the effect of impressing themselves upon her delusions. Toward the end of Louis Philippe's reign she began to perceive that she was shadowed by the police. Ugly stories were told of her, and false reports of her conduct were given in. About this time she went to the Louvre to copy pictures. There she was very much annoyed and discredited. Her pictures were destroyed, her colors were stolen, and she was prevented from working. The government wished to seize important papers in her possession. She went there because she knew that people repeated all that she said or thought, and they might easily find out her places of concealment. The governmental police employed stock-brokers to make her lose her money; they deceived her and made her sign her name unduly often. Voices that used to insult her told her that she was the granddaughter of Vidal, the governor of Martinique, and that she belonged to the family of Champigny. In 1856 she became aggressive. She took steps to regain the fortune out of which she had been cheated. She thought that spies came to her house to watch over and to insult her, and she threatened to set the place on fire. In 1870 she became a revolutionary propagandist, teaching, working, and advising action when the time had come. She went to manufactories to waylay the workmen and to spread her ideas. On one occasion she was taken into custody when on such a mission. For some years past her mental faculties have been declining, and she has abandoned many of her grandiose delusions. She has become emotional, and is easily moved, either to tears or to laughter. Her memory is failing, and her ideas are becoming confused. In her case there is a double cause for the intellectual decay; first, the natural progress of the insanity, tending toward dementia, and, secondly, the influence of the increasing atheroma of the cerebral blood vessels.

ABSTRACTS AND EXTRACTS.

THE PHYSIOLOGICAL PATHOLOGY OF EPILEPSY.—Marinesco and Serieux, in a memoir crowned by the Belgian Royal Academy, a portion of which is published in the *Gaz. Hebdomadaire*, November 23d, in discussing the pathology of epilepsy, first take up the physiology of the cortex, holding with Munk and his followers that the cortical convolutions contain the elements necessary for the perception of impressions, and that their excitation causes, according to the degree of the excitation and the region, hallucinations or convulsions. The neurons of the cortex are of three kinds—the perceptive, or the centripetal axis-cylinder neurons, the associative, and the centrifugal or discharging neurons. There is not, they hold, any direct route between the cortex and the muscles; every so-called voluntary, but really reflex, movement is made through the intermediation of the lower or spinal centers.

The aura is simply a hallucination of cortical or reflex origin, according as the epilepsy is central or reflex in its nature. In the former the cortex plays the same part as does the epileptogenic zone in peripheral or reflex epilepsy. The loss of consciousness, which is an essential symptom of epilepsy, but which need not necessarily be complete, is explained variously by different authors, some attributing it to cerebral anæmia, some to congestion, and others still to functional interruption of the psychic elements (Herzen and Buccola), or to disturbance of special centers (Bianchi). The authors consider it due to a phenomenon of arrest, bearing especially on the neurons of association. The stimulation of the perceptive elements produces the aura; that of both the perceptive and association elements produces automatism, pre- and post-epileptic delirium, etc.; that of the discharging neurons gives rise to the convulsions.

The cry that has been attributed by Axenfeld to fear, by Billod to spasm of the glottis and thorax, Marinesco and Serieux attribute to excitation of the cortical laryngeal center of Krause and Horsley. The fall is also one of the motor phenomena, and is not due to the loss of consciousness.

The pupillary immobility and dilatation is also a central phenomenon, as is proven by the fact that if the sympathetic of one side is divided it fails on that side, while very marked on the other. It is, according to Fr. Franck, one of the most significant organic symptoms. The involuntary discharges of urine or fæces are due to the contraction of the abdominal walls and of the musculature of the bladder and rectum. The intense cerebral congestion is considered as a vaso-motor reflex from the sensory cortex. The biting of the tongue is simply due to the spasmodic contraction of the muscles of the jaws, and those pushing out the tongue. The salivation is a secretory phenomenon, and not merely the emptying of the gland; the influence of the chorda tympani is exerted by the cortex.

The later symptoms, exhaustion, transitory paralysis, aphasia, etc., are due to the modifications of the cellular elements; they are simply phenomena of

nervous exhaustion. The protoplasm of the cells is incapable of its natural reaction in the centers for the paralyzed functions.

CEREBRAL HEMORRHAGE.—L. Stein, *Deutsche Zeitschr. f. Nervenheilk.*, VII, p. 313, in studying the etiology of cerebral hemorrhage, concludes that military aneurisms have much less to do with its causation than has previously been held, and apart from mechanical causes, such as trauma, etc., hemorrhage of the brain is most frequently due to disease of the vessels that causes a loss of elasticity in their walls. Typical military aneurisms are rare, but atheromatous and luetic changes of the vascular walls play a very extensive rôle. Mechanical causes are more common than is commonly held to be the case in producing hemorrhage, without any real arterial disease sufficient of itself to produce it.

GLIOSIS IN EPILEPSY.—Bleuler (*Muenchener med. Wchn.*, August 13, 1895—*Gaz. Hebd.*, October 12th) examined twenty-six brains of epileptics with the view of testing the findings of Chaslin. He studied only the subpial proliferation of the neuroglia, which he found over the whole cortex, but the olivary region was not involved, as claimed by Chaslin. All the patients were more or less demented, and the changes corresponded more to the degree of dementia than to the epilepsy, and he could not determine the influence of the attacks in producing the lesion. Similar lesions, more or less marked, were met with in five cases of idiocy, three of paresis, three of paranoia, and three of senile dementia, but they did not present the same regularity in the gliosis as did the epileptics. The neuroglia cells of the cortex were not increased in number, but were often pigmented. Lesions of the nerve cells were also found, but their connection with the epilepsy was not certain. In some cases vascular lesions were present. The relation of the gliosis to the epilepsy is hard to state; it may have been a consequence instead of a cause. As all of the cases were of long duration and demented, it could not be said that the anatomic changes occurred parallel to the attacks, but the author thinks it is possible.

On the whole, the investigation does not clear up the pathology of the symptom or support especially, the assumption of Chaslin—that the original lesion is apparently to be found in the neuroglia.

PUERPERAL INSANITY.—Dr. J. E. McCuaig, *Medical News*, November 16, 1895, claims that in no class of cases of insanity is the prognosis so favorable as in those of puerperal origin. In his statistics of those of under a year's duration only 3.3 per cent of the maniacal cases became chronic and 12.4 per cent of the melancholic cases. The recovery percentages of cases of less than three months' duration were respectively 89.3 and 75.

The number of previous pregnancies seems to have little influence, but the age seems of more importance; the younger the patient the better, apparently, is the prognosis.

SYPHILIS OF THE BRAIN.—In concluding a clinical lecture on cerebral syphilis, Dr. C. K. Mills (*Medical News*, December 7th) makes some general remarks, of which the following are the principal points: Direct true inflam-

mation of the cerebral substance from syphilis is rare, and occurs especially in the vicinity of gummata and in connection with meningitis. Neurotic softening, due to obliterative muscular inflammation, is sometimes mistaken for an inflammatory product. Charcot and others have described a localized disseminated cerebral inflammation. The symptoms of this and other forms are multiform and are largely masked by those of the tumors, meningitis, or other associated lesions.

Some forms of focal sclerosis of the nerve centers are due to syphilis. According to Lancereaux, these can be distinguished from other forms of sclerosis by the greater tendency of the neuroglia to fatty degenerations, and by the occurrence of foci of softening in their neighborhood. The occurrence of true insular sclerosis of the brain is dubious, but its possibility is favored by analogy. Cases of miliary and lobular sclerosis have been recorded with clear specific histories.

If recognized early, and promptly treated, some of these conditions may improve or approximately recover, but absolute cure is questionable. The great remedies are iodides and mercury, and the weight of authority is in favor of the former over the latter. If the iodides fail, mercury may be tried.

The iodides should be used in efficient doses if at all. Dr. Mills usually begins with fifteen or twenty grains three times a day, gradually increasing till several drachms are taken daily. If iodism is produced, it may be necessary to discontinue treatment, but occasionally, when due to small doses, larger ones cause it to disappear.

If it can be systematically and thoroughly carried out, mercury, by inunction, is one of the best methods of mercurial treatment—from one-half to one drachm can be used daily. By the mouth, calomel and the biniodide are to be preferred, the former in small doses frequently repeated, with opium, if necessary, to control the bowels, and the latter in doses of one-twelfth to one-sixth grain, with the same precautions. In Germany the hypodermic administration of mercury has been used with success; also to some extent in this country.

Dr. Mills indorses Gower's suggestion, that every syphilitic subject should, for five years after his last symptoms, undergo a three weeks' course, twice or three times yearly, of the iodide in daily dose of twenty or thirty grains.

HEREDITY AS A CAUSE OF IDIOCY.—M. W. Barr, *Times and Register*, September 7th, discusses the effects of heredity in the production of idiocy. He reviews a number of authorities, showing up to 70 or 80 per cent with hereditary antecedents of mental or nervous weakness, reports several cases of hereditary families of imbeciles or idiots, and finds from his study of 1,044 idiots, 38 per cent with heredity of insanity or imbecility, and 21½ per cent with that of various neuroses. Consanguinity of parents he found in only 3½ per cent. Intemperance in parents was found in 18.38 per cent of his cases; the Connecticut statistics showed 32.34 per cent. He agrees with Langdon Down as to the importance of intoxication of the father at the time of begetting the child, as shown in one case in his own practice. Phthisis, which Shuttleworth credits with 28.31 per cent, he does not specially discuss.

In conclusion, he refers to the "Tribe of Ishmael" as the most appalling example of heredity on record, where the history traced through forty years "shows descendants of one unclean, neurotic man, multiplying by consanguineous marriages into 250 families, numbering some 5,000 individuals, whose continuous criminal record has passed over the Northwest a flood of imbecility and crime."

THE SUPREME COURT OF THE UNITED STATES has just put itself on record by a decision in regard to the plea of insanity, that will, as coming from the highest court in the land, have great authority as a precedent. On December 16th Justice Harlan handed down the opinion of the Supreme Court in the case of Dennis Davis, charged with murder and tried and sentenced in the United States Court for the Western District of Arkansas, in which the defense had been insanity. The court below had instructed the jury that it was incumbent upon the defense to establish the fact of insanity to secure acquittal on this charge, but this ruling was reversed, the court laying down the principle that the burden of proof of guilt rests in all criminal cases upon the prosecution. In delivering this opinion Justice Harlan cautioned the courts against giving too much heed to popular clamor against pleas of insanity. The opinion in this only states what is the natural corollary of the principle—that every man is presumed innocent till proved guilty.

JUVENILE PARESIS.—Alzheimer, *Allg. Ztschr. f. Psych.*, LII, No. 3, discusses the subject of early paretic dementia—the developmental general paralysis of Clouston and others. He analyzes thirty-eight cases found in the literature, and adds fully detailed accounts of three personal observations of his own. He finds that, as regards its etiology, syphilis plays a predominant, if not, indeed, an exclusive, rôle; that hereditary predisposition seems to favor it, and traumatism may be the immediate cause of the outbreak of the symptoms. Clinically, the tendency is toward a form of chronic dementia without delusions, though other psychic symptoms may occur, but generally as transient phenomena. The course and prodromal stage are rather longer than in the adult type. The paralytic symptoms generally appear early, and are prominent throughout. Hemiplegias, paralytic strokes, tabetic symptoms, optic atrophy, etc., are relatively rather frequent.

The macroscopic post mortem findings are similar to those in other forms, and the same is true of the finer lesions. In two of his own cases he found pronounced degenerative changes in the basal ganglia.

While the cases reported show many peculiar features these are not, in his opinion, such as would authorize us to erect them into a special clinical type. Aside from the youth of the subjects, all the peculiar features are met with in different cases of paresis of older persons.

This form, however, he holds, throws a certain important light on the pathology. The usual causes other than syphilis to which paresis is attributed—grief, care, overstrain, the struggle for existence—fail here; the paresis occurs at an epoch when physical and psychic stress are at a minimum, and the influence of syphilis is all the more marked. The develop-

mental changes credited by Clouston and others can hardly play a part as early as the ninth year (at which age some of the cases began), and therefore Alzheimer rejects these as an especially important factor.

THE TREATMENT OF MORPHINISM.— Gilles de la Tourette, *Bull. Gen. de Therap.*, September 15, 1895, (abst. in *Rev. Internat. de Méd.*): Two chief methods of treatment are practiced — the total removal of the drug at once, and its gradual discontinuance, each of which has its special indications. In general, when the daily quantity taken exceeds fifty or sixty centigrams, the total suppression of the drug is advisable, as the gradual method takes too much time to demorphinize the patient. It should be done in a special establishment, away from home associations, and by a competent specialist physician. The patient's physical condition should be examined to see whether he has any cardiac disorder or attacks of angina pectoris, as in such case the brusque suppression of the drug may give rise to syncope. The condition of the digestive organs should be attended to, as alimentation is an important part of the cure. The administration of the drug should be regulated before the suppression, and for this, isolation in a special establishment is essential. It is easier to break off a regular habit than an irregular one. M. Gilles de la Tourette's rapid cure does not consist in a complete stoppage of the drug at once, but in a rapid suppression in the course of four or five days. It is of importance, therefore, that the habit be controlled before it is begun, so that the rate of decrease of the dose can be accordingly regulated.

If the patient's daily quantity is one gram of the alkaloid, he reduces it at once one-half. If two grams, he reduces it to seventy-five centigrams. As a rule about two-thirds of the dose is taken off the first day, and ten centigrams each following day, so that by the fifth day the suppression is complete. The first eleven hours the patient feels relatively well, there are no disturbing phenomena, but after twenty-four hours there are liable to be symptoms which, if they occurred when the patient was surrounded by his family, would, perhaps, necessitate the interruption of the treatment, hence the advantage of isolation. The most serious of these is syncope, that has amounted sometimes, in extreme or ill-judged cases, to fatal heart-failure. If there is no cardiac disorder, however, it is of slight importance, and can be relieved by a hypodermic injection of eight or ten centigrams of morphine. Vomiting, when it occurs, can be relieved by iced grog, champagne, etc. Diarrhoea may be salutary, as, according to some authorities (Sollier), the system relieves itself of the poison by the intestines. If, however, it becomes so severe as to be, as in some cases, a veritable morphinic cholera, it must be met by appropriate treatment. Maniacal excitement, vociferations, deliriums, etc., can be treated by sedatives, lotions, and baths, and, as it is usually during the eight or ten hours preceding the last hypodermic dose that syncope occurs, this should be given the last night. During convalescence the diarrhoea should be watched; it may last several weeks or a month. The same is true of the insomnia, and a sojourn of six weeks to two months in the special hospital is a very valuable adjunct to the treatment. Baths, douches, tonics, well-ordered and generous diet are needed

to restore the patient and to ward off the accidents of convalescence. The patient's weight should be recorded, as its increase will indicate the result of a good condition of his digestive tract. Travel, residence in the country, may be of value as removing the causes of and preventing a return to the old vice.

The gradual progressive method gives less good results; the reason of this is the length of the treatment, which is continued over two or three months instead of four or five days. It fails at least eight times out of ten. Accidents are rare, and it is employed only with the timorous patients. The following is Professor Charcot's method: (1) To insure, as a *sine qua non*, that the patient gives up one-third of his usual daily dose at once. (2) To substitute for the morphine the extract of opium; thus, for two and a half centigrams of morphine, he would give one and a half to two centigrams of opium, taking care not to exceed ten centigrams of opium; bromide of potassium may be also added against the excitement, the pains in the limbs, etc., up to the amount of three, four, or five grams. At the end of the treatment there will be in use about five or six centigrams of opium and four or five grams of bromide. At the same time douches and hydrotherapy are to be employed. Whenever it is possible we should try to have the last four or five centigrams of morphine shut off at once. When this is done the bromide and opium dose is unimportant, as after the hypodermics are discontinued the patient does not care to take them. Then it is only a small matter of ten or twelve days to the final end of the treatment.

THE MENTAL STATE IN VERTIGO.—Dr. J. Leonard Corning, *N. Y. Med. Journal*, September 7th, concludes a paper giving an account of some experimental researches on vertigo, with the following conclusions:

Summary.—1. In vertigo, however slight, consciousness is always impaired.

2. This impairment increases in the direct ratio of the intensity of the vertigo.

3. Though the clinical causes of vertigo are manifold, they have at least this in common—that they, one and all, are capable of interfering, either directly or indirectly (reflexly), with cortical function, with consequent impairment of consciousness. To regard vertigo as essentially a cortical derangement, of either direct or indirect origin, accords with the experimental data, and is clinically explanatory.

4. The condition of psychical instability and sluggishness engendered by vertigo favors the occurrence of hypnosis.

5. A person in a state of vertigo is thereby rendered unusually susceptible to the influence of nitrous oxide, ether, and other agents of light character; but, if the anæsthetics are first inhaled in moderate quantity (without inducing unconsciousness), it will be found that when an attempt is made to induce vertigo the latter is diminished or entirely prevented. The significance of this last fact, from a neuro-physiological standpoint, is apparent.

THE ETIOLOGY OF PARESIS.—Hirschl (Wien), *Verein f. Psych. u. Neurolog.*, in Wien, October 4, 1895, rep. in *Neurologische Centralbl.*, November Vol. LII—No. III—I

1st, attempted to prove that paresis is a tertiary syphilitic condition, utilizing for the purpose the statistics of 200 male paretics in Krafft-Ebing's clinic. All other causes than lues are trivial. In 175 cases, with a sufficient history, 56 per cent were certainly syphilitic, 25 per cent probably so, and in the remaining 19 per cent the data were insufficient to pronounce syphilis probable. But in sixty-three cases of late syphilitic symptoms only 54 per cent gave a certain, and 9.5 per cent a probable, history of syphilis, while 36.5 per cent furnished no history of specific disease. The unity of the clinical and the pathologico-anatomical findings sufficed to show also a single etiological moment—syphilis—and that a combination of causes is not essential. The following facts are to be borne in mind: (1) The anatomical process is a diffuse interstitial cortical encephalitis, analogous to interstitial hepatitis; only that in the encephalitis the process sets in with the involvement of the organ cells, while in hepatitis this has not yet been demonstrated (non-specific interstitial hepatitis, for example, after phosphorus poisoning, begins with degeneration of the parenchymous cells). There is no other interstitial encephalitis than paresis. (2) Reflex pupillary rigidity occurs almost exclusively in paresis, tabes, and syphilis. It is one of the symptoms associating paresis with lues. (3) Various observers have seen remissions produced by specific treatment (two cases in Vienna). The iodides generally are preferable to mercurials.

In the discussion following, Wernicke (Breslau) claimed that the peculiar lesion in paresis was that of the nervous elements (Tuczek and Lissauer), and that interstitial lesions were secondary and unimportant. Lissauer has shown (1) that the focal symptoms of paresis depend upon focal, laminated destruction of the ganglion cells at the points which are the starting points of the local symptoms; (2) that the granular cell degenerations in brain are secondary, and behave like other secondary degenerations. Tabes and paresis are after-disorders, but not modes of manifestation of syphilis; the latter only furnishes the soil. Nothing can be said for the specific treatment of paresis. W. had never seen any effects from it, especially the mercurial treatment. Improvement may follow the iodides, when there is a simultaneous increase of body weight, but this is true also for the acute psychoses.

Putzar (Schœnbrum) said that according to Flechsig sulphide of carbon intoxication might give rise to paresis, especially in the young.

C. S. Freund (Breslau) remarked that two series of cases of paresis after trauma must be distinguished; in one there was antecedent syphilis, in the other not. The last has a very slow course (ten to twelve years), great retardation of thought, monotony of ideas, frequently combination with hysterical stigmata. To this class belong also the so-called campaign paralyses. The final picture is that of the usual paresis.

Anton (Graz.): Thousands of syphilitics are not paretics, and this is to be considered. Bodily and mental overstrain is an important factor. In the lower classes of the large cities there are many more paretics than in the country asylums. A comparison can be made also with lyssa. He had seen in the incubation stage in four cases of lyssa, a sudden outbreak of the symptoms from emotional disturbance, shock, fall under the wheels, etc.

Chiari (Prag.) had observed two pathologico-anatomically different types,

those apparently without meningitic processes, and those in which marked adhesions occurred, so that the pia could not be removed without taking the cortex with it. He also considered the disappearance of the nerve elements probable.

Pick (Prag.) was personally of the opinion that in paresis we had to do with a parenchymatous process, but there were two facts to be considered: (1) Paresis is not a clinical unity; (2) our methods hitherto have been insufficient for the proof of interstitial alterations. We must hope for some help in obtaining this in the Weigert glia stain. He had observed in one case with existing luetic lesions, the latter to give way to specific treatment, but there was no remission of the paresis.

Wernicke (Breslau) was already informed as to the results of Weigert's glia stain. The alterations of the glia, according to Weigert, are nothing else than the secondary expression of a preceding parenchymatous process. * * * The adherence of the pia to the cortex is generally a post-mortem lesion; in autopsies directly after death there is no decortication. Only very rarely are actual microscopically determinable growths between the pia and cortex.

Hirschl (Wien): Syphilographers to-day count gumma also as non-syphilitic (Finger). There was no case of intoxication paresis among his 200 cases. Traumatic cases give the appearance of paresis, but the symptoms of pupillary rigidity and disorder of speech are often wanting; while there are many syphilitics and few paretics, there are also few gummatous cases.

Winternitz (Wien): Finger's views as to tertiary syphilis are very questionable; it is doubtful also whether tertiary syphilis is not hereditary; also whether it is not infectious, as is also dubious the difference of the influence of the iodides on secondary, and of mercury on the tertiary manifestations. Both phenomena may occur in the same person.

THE RELATIVE PROPORTIONS OF THE CRANIUM AND MANDIBLE ACCORDING TO SEX AND AGE.—The following are the conclusions of a paper by Gurrieri and Masetti, *Rivista Sperimentale*, XXI, pp. 297-318, on the above, deduced from the study of 200 crania:

1. The male cranium weighs more than that of the female, with or without the lower jaw.
2. The difference between the weight of the cranium and the jaw is greater in the male than in the female.
3. The individual variations of the weight of the cranium are greater in the female than in the male.
4. According to age we find the above the more marked, and we further find:
 - (a) That the male cranium between the ages of twenty and forty-five is heavier than between forty-six and seventy.
 - (b) That the same is true of the cranium in the female.
 - (c) That the male cranium is heavier than that of the female in both periods of life, viz., between twenty and forty-five, and forty-six and seventy.
5. The lower jaw is heavier in the male than in the female

6. According to the age, we find still more prominently accented in the lower jaw the relations we find in the cranium, thus:

(a) The mandible in the male between twenty and forty-five is heavier than that of the male between forty-six and seventy.

(b) The same holds good in the female sex; and —

(c) In the male, both young and old, it is always heavier than that of the female.

From these conclusions it is shown that the difference in weight between the cranium and mandible is a good index for distinguishing the sexes; and, further, that it gains in importance when we take into account the influence of age on the weight of both.

THE ELIMINATION OF PHOSPHORIC ACID IN THE URINE IN THE DEPRESSIVE STAGE OF CYCLICAL INSANITY.—U. Stefani, *Rivista Sperimentale*, XXI, p. 319, reports the result of an investigation as to the excretion of phosphoric acid in the urine. He first reviews the available literature of the subject and shows the uncertainty and divergence of opinions. As regards mental disorders, the opinion seems to be that it is increased in the excited stages and forms, but nothing very definite has been shown as regard the elimination in depressive conditions.

Stefani reports a carefully observed case in which daily examinations of the urine were made in the post maniacal interval, the initial stage and acme of depression and the remission, which clearly shows a decrease of the elimination of both urea and phosphoric acid during the depressive stage, the decrease of the latter, which is much the more marked, beginning at the first onset and gradually decreasing till the acme is reached, then the quantity gradually augmented till the remission, during which it early reached its maximum. The decrease in the excretion of urea was much less marked and regular, but the regular lessening of percentage proportion of phosphoric acid to urea was very noticeable. The quantity of the urine notably decreased in the acme of the attack, while its density was greatly augmented.

Not believing it possible to maintain constant the diet, an examination of the fœces from the beginning was not attempted, and lacking this, Stefani does not attempt to say whether the diminished elimination of phosphoric acid is due to reduced absorption or to retention. Ordinarily, judging from the known facts, he would refer the decreased elimination, in great part at least, to a modification of the intimate metabolism of the cerebral tissues, which does not appear to follow a decrease of mental activity, but, on the contrary, to precede it, and one might almost say to prepare the way for it.

NEW REMEDIES IN EPILEPSY.—Lui, *Rivista Sperimentale*, XXI, 1-2, 1895, has experimented with the Flechsigs opium treatment of epilepsy, and with the Bechterew method of combining with the bromides an infusion of *adonis vernalis*. During the use of the first-named method he observed a mitigation of the disease in two cases, but an intolerance to the treatment in the third. In ten epileptics, treated by the Bechterew prescription, he found generally a marked improvement, and observed no unfavorable modifications

of the patient's condition, while under the Flechsig treatment some of the symptoms of disordered digestion and mental torpor were frequently observed.

The Bechterew method was tried also in a rather unusual case of vagus neurosis, characterized by violent stenocardiac attacks, with laryngeal spasm and bronchial asthma, etc., with marked beneficial results during the methodical use of the method.

Experiments with the borate of soda treatment were not so successful, and he does not indorse it.

Following Lui's communication is one by Guicciardi on the Bechterew method, of which the following are the conclusions:

1. Bechterew's solution is not curative of epilepsy in itself, but does cut off, or rather much diminish, the attacks.

2. It acts on these, apparently, mainly through the bromide it contains.

3. It is usually well borne by the patients, while it permits an easy tolerance within the limits of its proper dose (80 to 120 grains), and, as it appears, does not carry with it any of the common but disagreeable effects of the bromides (possibly because with this method the latter are given in a notably attenuated solution).

4. It is in every way more effective than borate of soda, and has none of its injurious effects on the general health and the digestive apparatus.

5. It can be employed also for a long time without injury or cumulative effects, or any marked diminution of therapeutic effect, the dose remaining the same.

6. It possesses, therefore, the indications of simple bromides for reducing the violence and frequency of the convulsive attacks, but can be used in preference to it when a revival of the cardiac force is required, and in cases with general debility, and by its mode of administration, it may be especially useful in private practice.

THE FORENSIC VALUE OF INVESTIGATION OF THE VISUAL FIELD.—Otto lenghi, *Rivista Sperimentale*, XXI, Fasc. 2-3, thus sums up his conclusions from a study as to the value of the visual field, in a medico-legal point of view, in continuation of the line of research already carried on by him and published in the *Gazetta Ospedali* and *Archiv. Psych. Sc. pen. e. Antrop. Crim.*, in 1892 and 1893. He gives diagrams of the visual field in delinquents and epileptics, and reports in detail three cases in which its examination was utilized in the testing for simulation of insanity. His conclusions are as follows:

"Coming to the conclusion of this study, I believe myself authorized to infer that the measurement of the visual field may be of great value under many circumstances in legal medicine—

- "1. By the study of the sensibility in general and the psychic examination of the degenerates, as is shown by the investigations made of cretins and deaf mutes.

- "2. By bringing out features that may be diagnostic of epilepsy and congenital criminality.

"3. By furnishing symptomatic data, not pathognomonic, but frequent, in neuroses and traumatic epilepsy.

"4. In determining the action of certain excitants — magnets, amyl nitrite, emotions, hypnosis, etc.

"5. For testing the sincerity in certain mental states, unmasking skilled simulation, examination of the visual field simply for testing the phenomena of fatigue, also in many ways gives occasion to determine the sincerity of the subject."

THE CIGARETTE HABIT.—J. C. Mulhall, *Quarterly Journal of Inebriety*, October, 1895, says that cigarette smokers may be divided into two great classes — those that inhale the smoke and those that do not. The latter class is a very small one, and they are comparable as a *habitué* of tobacco to the users of the pipe or cigar, but to a less degree. All real devotees of the cigarette inhale, and the pleasure of cigarette smoking, as compared with other tobacco habits, consists in the pleasurable irritation of the laryngeal and tracheal branches of the pneumogastric nerve.

The absorption of nicotine is in proportion to the absorbing surface, hence a great part of the danger of cigarette smoking. When the smoke only enters the mouth three-fourths of the nicotine is wasted, as regards intoxicating power, as compared with the cigarette; and while the cigarette is weak as compared with the cigar or pipe, this practice and the continuous repeated dose indulged in by most of its *habitués*, make it far the most injurious.

The evil effects of cigarette smoking are both local and constitutional. Symptoms other than those of nicotine poisoning need not be expected and are not found. There is no reason to believe that other drugs are often, if ever, made up in the cigarettes than tobacco. The local effects are those on the upper respiratory passages, and these simply consist in hyperæmia and mild irritation. The great evil is the constitutional effect, especially in the young, who are the more readily led into the habit by the mildness of the dose and ease with which it is begun. The smoker soon learns to inhale, and the result is a more rapid and complete poisoning of the system by this habit than by the use of strong cigars or pipes, and the effects of the nicotine on the nervous system is the sooner produced.

After puberty the evil is not so great, but is still serious; the greatest danger is in the young, who are becoming more and more addicted to the habit. It is at once the most dangerous introduction to the use of tobacco, and later becomes one of the most potent methods of saturating the system and insuring its evil effects. The part it plays in increasing nervousness and mental troubles is serious enough to make every effort at reform of what is becoming a national vice advisable.

INSANITY IN CHILDREN.—Conrads, *Archiv. f. Kinderheilk*, XIX, 175-216, gives a lengthy review of the subject of infantile mental derangement. First, he notices the varieties of insanity in children and gives an extended notice of the literature. As regards the question of the relative frequency of insanity of the two sexes in children it can not be definitely stated with our present statistics.

Among the causes heredity is first; next comes the condition of the child's bringing up, his education and training, the management by nurses by frightening their charges, the discipline and methods at school, etc. Psychic causes, fear, shame, and especially mental shock, are not to be underestimated. Emminghaus found 23 per cent of the cases he collected in the literature to be due to these causes; homesickness is not common, but cases have been known. Conrads lays some stress on the evil effects of religious excitement in predisposed older children.

Contagious (mental) and epidemic influence need mention, as they have been repeatedly observed. Onanism has been undoubtedly overestimated as a cause, but in predisposed persons it may have its effects.

Among the somatic causes, acute infectious fevers are first in frequency. Emminghaus found these as a cause in 25 per cent of his cases. Trauma, especially of the head, insolation, exposure, etc., have all had their victims. Ear disease and dentition may affect the mental condition, and the effects of nasal disease, adenoid vegetations, and tonsillar enlargements are suggestive. Middle-ear disease has been demonstrated by Bouchut and Emminghaus as causes of infantile derangement; intestinal parasites, tuberculosis, and cardiac weakness are also factors. Hereditary syphilis is the cause of juvenile paresis; whether it acts in producing other forms of insanity is uncertain. Long continued suppuration has been the cause of melancholia, as in one case of Conrads' own observation. Reflex psychoses, aside from those from ear and intestinal disorders, have been observed to follow wounds, extraction of teeth, etc. Various poisons—lead, mercury, cocaine, tobacco, etc.—have caused mental disease in children as well as in adults, and alcoholic insanity has been often reported. Conrads gives briefly a case of acute hallucinatory delirium observed by him in a child of 2½ years, from this cause.

The permanent psychoses of children occur usually in degenerate individuals, who sooner or later reveal their stigmata. The first symptoms of insanity can naturally only be looked for after the conscious perceptions have become manifest in the child and must consist in aberrations of these. The earliest age at which hallucinations have been observed is 14½ months (Marce). Visual hallucinations are far the most frequent. Delusions can only show themselves after a certain stage of mental development.

The types of mental disease in children fall under two heads—the pure psychoses and the forms connected with the neuroses. Of the former it is difficult to say whether mania or melancholia is most frequent in the earlier years, and both are most frequent toward puberty. Mania generally begins without the prodromal, depressed phases, runs a subacute course, and generally ends in recovery. Melancholia may assume any of its types, is commonly gradual in its onset, and is subject to remissions. Its course and prognosis are the same as mania.

Suicide in children should be mentioned in this connection, and from the statistics of France and Prussia seems to be steadily on the increase. It is, however, still infrequent. Conrads, taking the proportions of adults and children in Prussia in connection with the statistics of suicide, finds that it is forty-six times less common in the latter than in the former.

Periodic insanity in children is usually of the maniacal type, and, with

circular insanity, has an absolutely unfavorable prognosis. But few cases of either are found in the literature.

Under hallucinatory insanity, Conrads includes two types—acute hallucinatory paranoia and transitory insanity—both characterized by hallucinations, the former the more chronic and the latter the acute type. In the former occur the stuporous cases that are often confounded with melancholia. The prognosis of both, except when they succumb to exhaustion or suicide, is favorable.

Paranoia of the pure type is rare in childhood, but the degenerative prodromal stage of the original paranoia of Sander is very common. These candidates for paranoia are usually of the male sex; in all there is a hereditary taint. They are generally quiet, sentimental, and hypochondriacal children, who are liable to feel themselves slighted by their parents, and often conceive notions of self-importance, which are the incipency of their delusions. Hypochondria is closely allied to paranoia, and while its occurrence is rather rare, and has been denied in children, it is sometimes met with and is usually a degenerative sign. Its prognosis is only favorable in the milder cases. Imperative conceptions and acts are also met with, and frequently indicate a degenerative taint, and are often connected with masturbation as an exciting cause, but they are not so serious in their prognosis. The so-called “impulsive insanity” is diagnostically indistinguishable from these impulsive acts, though it has been accepted as a special type. It is always degenerative and of unfavorable significance.

Passing by what is said of idiocy, a word can be given to moral insanity. This, Conrads claims, rarely exists without some mental impairment, and sexual perversion is often present. Recovery is as improbable as in idiocy; the apparent recoveries are, perhaps, only remissions of long duration.

Paresis in children has been lately reported by various authors. Its connection with hereditary syphilis has been already noted.

Among the neurotic insanities, that connected with epilepsy takes the first rank. Hysteria is commoner in children than it is generally supposed, especially in girls. Heredity is its most important etiological factor. The mental disorders of chorea consist mostly in capriciousness, irritability, and a great tendency to sudden emotional disturbances. Hallucinations, illusions, and maniacal delirium may also occur, and Leidesdorf has observed hallucinatory paranoia. Very recently Moebius has directed attention to the resemblance of choreic to toxic insanity as supporting the view that chorea may be of infectious origin.

As regards the therapy, it would be best if all cases, except the milder forms of mania and melancholia, hypochondria, and the cases of imperative conceptions, and the stuporous cases, were treated early in a special asylum, very few, if any, of which, unfortunately, exist for children. Prophylaxis is still more important, and should properly begin literally *ab ovo*. The marriage of degenerates, insane, drunkards, etc., is a most prolific cause of infantile insanity and idiocy. Where the tendency exists in the child, its bringing up and education must be the subject of the greatest care. Ignorant and reckless nurses, especially if given to drink, may do the greatest injury, and in no case should alcohol in any form be allowed to a child under

ten years, excepting, of course, as medicine in acute infectious diseases. Special care should be given to the points of masturbation and the general habits of the child; to the possibility of nurses or others working injuriously upon its fears and imagination; to the educational methods and discipline. It would be well were teachers obliged to study mental pathology in their professional preparation.

As a summary of the points in regard to which it is desirable to direct attention in relation to the psychoses of children, Conrads concluded his paper with the following as desiderata:

1. Statistics of infantile insanity, by means of circulars of inquiry to the medical profession, as to the actual number of insane children in their knowledge.
2. Information as to relapses, by communication from medical men as to the mental disorder of persons who had been insane in childhood. These could best be obtained from family physicians, who are usually able to follow the family history back for a lengthy period.
3. Special asylums for insane children.
4. Sufficient knowledge of teachers of the psychopathic states in childhood, and greater care in schools to mentally-defective children.

BOOK REVIEWS.

State of New York. State Commission in Lunacy. Sixth Annual Report, October 1, 1893, to September 30, 1894. Transmitted to the Legislature May 24, 1895. Albany: James B. Lyon, State Printer, 1895.

This bulky volume of nearly seven hundred pages includes a large and varied amount of information, much of which has in it more or less of interest to the alienist physician. Some of the matter of the report, as in every publication of its kind, is purely perfunctory and official, and need not engage our attention. Such are, for example, many pages of the statistics and some portions of the special reports. The greater part of the book will, however, be found to contain something worth reading by the physician who has to do with the insane, especially in asylum practice, and it contains some important information. Among the subjects of general interest discussed is the dietary of the insane, which has been the theme of several papers recently published in this journal. What is said here hardly adds much to what has been published elsewhere, excepting as giving the individual views, in certain respects, of the New York superintendents on the dietetic list proposed by Dr. Flint.

The chapter on the "Provision for Insane Convicts" brings out the fact of experience that the plan of the Matteawan Asylum is not the best for such patients, and the recommendation is made by the commission that they be relegated back to a special department in one of the State prisons. This experience might have been anticipated by one practically acquainted with this class of the insane, but the classification might better be made, it would seem, on other grounds than the mere fact of conviction of crime.

This idea is also embodied in the message of Governor Morton to the Legislature, in the recommendation that a "plain and substantial asylum" be built for this purpose on land adjoining the Clinton prison at Dannemora. He approves the recommendation of the erection of hospital annexes at the several institutions. There is always danger in vast congregations of the insane that the interests of the acute and curable cases may suffer. Nothing would tend more to the improvement of the scientific work of the State hospital service than the realization of this suggestion. Science must always be encouraged to the utmost to hold its own against mere ways and means.

The answers from the different hospitals to the series of questions proposed by the commission give interesting data and indicate a very advanced and humane system prevailing in New York State hospitals. The slightly variant but generally judiciously conservative views of the superintendents on the questions of restraint, open doors, female attendants in male wards, etc., are especially noteworthy.

The report of the investigation of the New York City asylums by the commission, on account of charges by the New York *Herald*, amounts practically to a condemnation of the political system of control of these institutions. One rather striking finding is that in regard to the charge of overdosing. The physician admitted freely that single doses of as much as

120 grains of morphine, $1\frac{1}{2}$ grains of hyoscyamine, and 90 grains of chloral had been given to one patient, who, it was claimed, was, by idiosyncrasy, resistant to lesser doses of these agents. The natural impulse of most therapeutists would have been to have stopped short of these quantities, and the commission's censure of the experiments seems, on the whole, rather mild.

A matter of some interest is that of the decisions of the Post Office Department as to the correspondence of the insane. The question as to the definition of the "comparatively few" of the patients' letters that ought to be suppressed is, of course, subject to the decision of those who have the matter directly in charge.

Aside from these special features of the report, something may be said in regard to the defense of the general policy of the commission as stated at the beginning of the volume. It seems to be exercising the functions of a board of control, together with those of advisory medical and medico-legal supervision, and the tendency would seem to be to ultimately supplant and abolish the local boards of management. The combination, in a close board of only three members, of the business control with the other and higher functions of a lunacy commission, is an experiment that has not heretofore been a brilliant success, and there is a danger, in our opinion, of an undue predominance of a "business" spirit over the higher professional and scientific one. The ideals of the two are not in the same line, and while the former is perhaps the one most readily appreciated by the mass of the public, the latter is that which should be the aim of a body that is to have their fullest confidence. The tithing of mint, anise, and cummin tends sometimes to a neglect of the weightier matters of the law.

Of course everything will depend upon those who are to carry out the objects of the lunacy commission. Upon their scientific spirit and judicial fairness, their correct judgment and strict sense of propriety and honor, as well as upon their absolute integrity, everything really depends. It is to be hoped that these points are duly appreciated by the New York Lunacy Commission in the difficult and complicated task they have assumed.

Des Impulsions Irrésistibles des Epileptiques, par le Dr. Victor Parant, Directeur Médecin de la Maison de Santé Privée de Toulouse. (Irresistible Impulses of Epileptics, by Dr. Victor Parant.)

The title of this paper, read at the Congress of Alienists and Neurologists at Bordeaux, does not seem to us to be well chosen. It treats of the coördinated acts of epileptics in the states of more or less imperfect consciousness characteristic of the disease. The amnesia, which usually follows such conditions, renders their psychology somewhat obscure, but there seems no reason to suppose that the subjects of such attacks make any effort to resist their impulses, or are conscious of any reason for doing so. To apply the term "irresistible," under the circumstances, seems to us like calling the thoughts that pass through our minds in dreaming, "imperative conceptions." We should prefer to confine the term to the "obsessions," which give their victim no rest until he yields to them, although all the time painfully aware of their absurdity.

Leaving the title out of the question, the paper is an excellent resumé of

the present state of knowledge on the subject, without any marked originality either in theory or clinical facts. It brings together a multitude of observations, hitherto scattered through the medical journals, and the author's conclusions, both theoretical and practical, seem to us, almost without exception, thoroughly sound.

He holds that it is proved, by clinical and experimental evidence, that the epileptic attack results from irritation of the cerebral cortex. Usually the motor centers are principally involved, resulting in convulsions, but, although they are the most common and conspicuous phenomena, they are not the only ones. Disturbances of sensibility and of the intellectual functions are also observed.

It seems to us that this view, correct as far as it goes, could be much more strongly stated. The intellectual functions and, as far as can be determined, the sensibility are as profoundly affected as they can possibly be in the coma, which forms part of an ordinary epileptic attack. When, in connection with an attack of *petit mal*, the patient performs coördinated and, apparently, purposive acts, of which he afterwards retains no recollection, these differ from the complete loss of consciousness of the fully developed attack in degree — not in kind — just as the slight muscular spasm of such an attack differs from the violent convulsions of *haut mal*.

After considering the mental disturbances occurring in connection with convulsions, which may either precede, accompany, or follow the convulsive movements, he takes up the question of larvated epilepsy, or epileptic equivalents. He holds it to be established that undoubted cases of epilepsy, mental disturbances, in all respects identical with those connected with convulsions, may occur without any convulsive movements, and when precisely similar attacks occur in cases in which no convulsions have ever been observed, he sees no reason to question their epileptic character. He believes, therefore, that in such cases a positive diagnosis of epilepsy can be made in the absence of any history of convulsions.

The author agrees with Magnan in holding that other forms of insanity may coexist with the mental disturbances due to epilepsy. Epileptics, in very large proportion, present the stigmata of degeneration, and are liable to the same mental disturbances as other degenerates. Thus they may suffer from mania, melancholia, or paranoia in addition to epilepsy, and, in Magnan's experience, it has not been rare to find an alcoholic insanity superadded to such a combination, so that the phenomena of the three forms of mental derangement could be traced, coexisting in the same patient.

After discussing at considerable length the various disorderly and criminal acts which may result from the epileptic condition, he takes up the semeiology of the irresistible impulses of epileptics. One of the most characteristic features of the condition is suddenness of commencement. There is usually no warning; the subject, in the midst of his ordinary occupation, without any previous evidence of mental disturbance, suddenly performs some absurd or criminal act.

It is customary to say that the patients are unconscious during such attacks, but, as the author very properly points out, persons who show that they see what is about them, answer what is said to them more or less relevantly,

adapt means to ends, even take long journeys without acting so as to attract special attention, can not be said to be entirely unconscious.

Amnesia, on the other hand, is one of the most uniform and characteristic symptoms of the condition. As a rule, the patients have no recollection of what has happened. This, however, is not invariable, and the fact of a more or less distinct memory of the attack does not exclude epilepsy.

Another frequent characteristic is the identity of the symptoms of different attacks in the same person. The same words will often be spoken, the same acts performed, time after time.

Frequently the acts done during the attack are inconsistent with the patient's habitual conduct.

In the maniacal form, in addition to the foregoing, hallucinations, usually of a terrifying nature, are very generally present.

The patients show a ferocity of disposition entirely different from the elation of an ordinary maniacal attack, and often develop a degree of strength far in excess of their ordinary power.

The diagnosis follows from the foregoing points. Although all of these symptoms may be found in other conditions, the combination of all or several of them will ordinarily be sufficient to establish a diagnosis.

In regard to the medico-legal bearings of the subject, the author holds that, although the fact that a criminal act was performed under the influence of an epileptic impulse absolves the doer from responsibility, the mere fact that it was done by an epileptic does not prove that it was so performed. Many epileptics, even those subject to such mental disturbances, are, most of the time, entirely sane, and they should be held responsible for their acts, unless it appears that they were done during a condition of temporary or permanent mental derangement.

He considers that great caution should be exercised in the discharge of those epileptics who have been confined in institutions for the insane, on account of dangerous and criminal cases, and recommends that superintendents should not take such responsibility upon themselves without a consultation of experts.

NOTES AND COMMENT.

THE SUMMARY.—The editor feels like an unprofitable servant in his efforts on the "Half-Yearly Summary" of the present issue of the JOURNAL. (The former Summary editor, Dr. J. M. Mosher of New York, is abroad.) But however unprofitable "we" are, our readers must share the censure with us. Taking the forty-five States of the Union and the British Possessions, not one-third of them have come forward, after due request being made, with the needed items. Taking the whole number of institutions, the proportions of those offering anything is even smaller.

It is a cause for regret that the institutions and the men engaged in the profession of psychiatry are so little given to voicing themselves. This is doubtless a part of the unhappy isolation to which the institutions have been doomed, but which we believe is now becoming more and more a thing of the past. Many of us, it is true, are afflicted with "groanings that can not be uttered," but there is not one who might not with advantage become articulate in the columns of the Summary each time that it appears. There is not one among our hundred and a half or more of institutions that does not have really interesting material for an item of news. On the other hand, much of what is given is often too little condensed and possesses only a small amount of *general* interest.

Real *advancements*, real *news*, and a proper mixture of the personal element, which is so attractive when judiciously commingled, would greatly improve the Summary!

THE SUGGESTIVE PATHOLOGICAL RESEARCHES of the past few years in regard to the finer anatomy of the nervous centers bid fair to elucidate many obscure questions. Thus, the conception of the neuron, and the discovery that nerve connections are by contiguity rather than by continuity, suggest numerous possible physiological and pathological processes, which suggestions have been very extensively followed out by Andriezen and others. Taking with this the discoveries of Hodge as to the effects of fatigue upon the nerve-cell, confirmed later by Russian and English observers, we have a basis for at least extensive enough hypotheses for the exercise of the scientific imagination, to say the least. Some of the conclusions of Andriezen as to the pathological condition of different

cortical elements in insanity, seem as yet unsupported by actual facts of research, and are therefore still mere assumptions, but they are interesting and suggestive and they are along the line in which it is probable that we are to gain positive results in the future.

In this country the field has been ably occupied by Berkley, who, in his studies of the changes of the cortical cells and their processes from alcoholic intoxication and in dementia, has apparently, without going beyond the legitimate limits of deduction, given us a rational theory of the cortical pathology of general mental impairment in the atrophy and disappearance of the lateral gemmules of the cell processes, which seem to be the first, as the axis cylinders are the last, to suffer under toxic or morbid influences. His work has the merit of going no farther than the ascertained facts reasonably allow, and is therefore a valuable scientific acquisition.

The field is, so far, only opened for investigation, but the prospect given for the future, of gaining greater knowledge of what has been a *terra incognita*, the histological pathology of mental disease, is most promising.

THE PROSECUTION, before the County Civil Service Board, of the chief medical officer of the Cook County Asylum for the Insane, for insubordination to the lay head of the institution, is a humiliating instance of the estimate placed by politicians upon professional and "business" men respectively. The doctor could not give a death certificate in a case of sudden death without an autopsy, for which he made preparations and obtained the consent of friends without first asking permission of the political "business" man who was the legal head of the establishment. For this he has been tried for insubordination. The reputation and standing of the Cook County Asylum, which is badly enough in need of elevation, will not be helped by this proceeding.

VOLUNTARY COMMITMENT.—The New York Medico-Legal Society, at a recent meeting, adopted a resolution declaring that "the highest interests of the insane demand the incorporation of a law permitting voluntary admission to hospitals for the insane, among the statutes of the State of New York."

INSANITY AMONG FARMERS.—The often repeated statement, that seems to have captured the popular fancy, that farmers and farmers' wives are specially liable to insanity, hardly needs a contra-

diction to alienists. Dr. E. B. Lane finds that the proportion is twice as great in Boston as in towns under twenty thousand population, and that the ratio is about equal in small towns and in country districts.

Apropos to the above, the paragraph that has been going the rounds of medical journals, attributing insanity to early rising, is worth a comment. Dr. S. H. Talcott, of the State Homœopathic Hospital of New York, has the credit of originating this explanation of the prevalence of insanity in the farming community. If this cause of insanity has no better evidence in its favor than the prevalence of agricultural lunacy, it must be considered as on the whole a dubious one.

THE opening of the new McLean Hospital on October 1st was a notable event. A full illustrated description of this institution, by Dr. H. M. Hurd, is necessarily crowded out of this issue of the JOURNAL, but will appear in full in the April number.

THE STATE HOSPITALS' BULLETIN OF NEW YORK.—The following are extracts from a circular sent out by the editorial committee, Drs. P. M. Wise, S. H. Talcott, and Charles W. Pilgrim:

At a conference of State hospital superintendents with the State Commission in Lunacy, and after mature consideration, it was determined to commence the publication of a bulletin of hospital medical work in January, 1896, to be issued as a quarterly publication thereafter, until further action.

The Bulletin is to be known as the "State Hospitals' Bulletin." It is to be issued in January, April, July, and October, at least for 1896. Each number is expected to fill about 144 pages of solid small pica for text and, perhaps, leaded brevier for reports. It is to be octavo, or magazine, size of page. Its board of editors will comprise the superintendents of State hospitals, the director of the State Pathological Institute, and the president of the State Commission in Lunacy. Its collaborators will be the assistant physicians and medical internes of the State hospitals. The active work in the preparation of the Bulletin is relegated to an editorial committee elected annually from the board of editors. The committee, for the first year, is empowered to arrange the necessary details of publication. In case acceptable voluntary contributions are offered, no assignment of work is likely to be made, but if it proves that such contributions are not presented, the editorial committee is empowered to and will assign work to the several hospitals, for report at a time to be stated.

The Bulletin will be published at the State hospital printing department of the Utica State Hospital, under the supervision of a master of the art, and medical officers may rest assured that no medical periodical will exceed it in tastefulness of design and correctness of typography.

GEORGE GOUGH, an attendant at the Cook County Asylum, has recently been convicted of manslaughter for causing the death of a patient by brutal treatment, and, unless a new trial is granted, will be sent to the penitentiary under the indeterminate sentence act. Another attendant, who was also arrested for the same offense, has not yet been tried.

It is not creditable to an institution to have such trials of its employes necessitated, and it may be taken in this case, probably, as one of the results of the political management that has been too much the rule in the Cook County institution.

If crimes of this sort are committed, it is at least satisfactory to see punishment promptly follow.

SECOND MEETING OF THE ASSOCIATION OF ASSISTANT PHYSICIANS OF HOSPITALS FOR THE INSANE.

KALAMAZOO, MICH., October 24-25, 1895.

Dr. A. L. Warner called the meeting to order at 3 P. M., October 24th, and introduced the new president, Dr. Wm. A. Stone.

Dr. Edwards, superintendent of the Michigan Asylum of Kalamazoo, welcomed the association as follows:

"It is said that corporations have no souls. Perhaps for this reason some individuals are always ready to cry out against them, to take advantage of them, to filch from them, or to do things that they would scorn to do to another person. The State, to many people, is as soulless as a corporation. The asylum, being one of the charities of the State and not an individual enterprise, is likewise often an object for misstatements, unreasonable fault-finding, and many unjust criticisms. It is quite the fashion to criticise the asylums; indeed, since the somewhat noted strictures passed upon their management by an eminent but in some respects misinformed man, S. Weir Mitchell, I may say that it is a fad to criticise these institutions. It is held in some quarters that our asylums are expensive and, at the same time, poorly appointed; in other words, that they are gilded prisons but not hospitals for curative treatment; that the treatment is routine and unscientific, and that the appliances are clumsy and the methods in some respects barbarous. A popular distrust of asylums has thus been created, and this distrust has been aggravated by the unfounded or extravagant complaints of partially restored patients and other disaffected persons. The neurologist, gynecologist, and other medical brother, each in his special line, now finds it his pleasant duty to criticise asylum physicians. This they do with all the confidence that ignorance usually begets, and they proceed to point out the many shortcomings of the assistants, who, to believe some of their statements, are selected from the dullest and least promising of medical men. A writer, in a recent issue of the *Medical Record*, discourses on 'Routine Medication in Asylum Practice.' Let me quote from his article:

"To illustrate, let us take the ward physician in most any of our hospitals for the insane. They are mostly young men who have had little or no experience in general practice. They have treated some of the more familiar diseases, some of the epidemic diseases of childhood, have read some textbook on practice, and have a very hazy idea of the subject after all. If a patient is able to describe to him all his aches and pains, and lay before him a complete history of the case, then, according to rule 1, 2, or 3, he may pronounce the case one of asthma; whether caused from reflex nervous trouble or heart disease, he is not quite certain which. The various valvular lesions of the heart he has never had any clinical experience to enable him to distinguish, and the curious murmurs and turbulent sounds convey to his intelligence nothing of diagnostic value.

"And perchance it may be a lung trouble; here again the average ward physician is all at sea. The sound he hears may be all right or all wrong, but he could not be qualified to determine.

"I might quote further from this writer, but I think you will agree with me that I have cited him sufficiently. The quotation is a fair sample of the

entire article. The author ascribes the deplorable condition which he recites to the influence of politics in State institutions, and the only hope he sees is their separation from such vicious influence. That the condition he outlines may exist in some asylums is possible. That it exists in *all*, as he indicates, is a gross perversion of facts. We who have lived for any length of time in an asylum realize all too truly the tendency to get into routine ways and to be conservative in all matters. We need the stimulus of association with others to enable us to attain the best results. That such stimulus will be supplied to you by the meetings of this association, I am very confident. I know of no step recently taken in the medical work of asylums that promises more for good than the organization of this association and these meetings. It brings the gentlemen composing it together for exchange of thought and discussion of methods, and, as you meet from time to time at various institutions, your observations will be of benefit, alike to the asylum with which you are engaged and the one which you visit. No asylum possesses all the advantages. There are many things in our sister institutions which we would gladly copy at Kalamazoo, and many which we hope to be able to copy before long.

"I regret that we can show you no laboratory building that is well equipped in all particulars. We hope, however, to have such a separate building. In so many of our institutions the major efforts have been directed to the provision of further accommodations for patients, too often to the neglect of providing suitable appliances for scientific observation and treatment.

"I would suggest, if the matter has not already been provided for, that your secretary prepare a report of this meeting that shall show the objects of the association, character and amount of work done, and that such report be offered to some one or more of the leading medical journals for publication, as well as to the *AMERICAN JOURNAL OF INSANITY*, and such other special publication as you may elect. I think it eminently proper that the results of your meeting should be made known to the profession at large.

"It gives me great pleasure to most cordially welcome you to the Michigan Asylum for the Insane. I hope your deliberations may be of the benefit to you that I know they shall be to us."

The minutes of the first meeting (May, 1895) in Kankakee, Ill., were adopted as printed in the July, 1895, number of the *JOURNAL OF INSANITY*.

The following order of business was adopted, and is to be added to the by-laws: 1. Call to order. 2. Special communications. 3. Report of committees. 4. Election to membership. 5. Election of officers. 6. Unfinished business. 7. New business. 8. Regular programme (reading of papers, etc.) 9. Announcement of the next place of meeting, and of the next president.

A motion to the effect that the treasurer shall report at the annual meetings only, was adopted, and the word "annual" was inserted before "meeting" in Section 5 of the by-laws.

Dr. J. Morse moved that a section 9 shall be added to the by-laws, to the effect that the annual dues of each member shall be \$1. The motion was seconded and carried.

Dr. A. L. Warner moved that a resolution shall be prepared by the committee to the effect that the membership shall not be restricted to the assistant physicians of the States of Illinois, Iowa, and Michigan.

Dr. A. Meyer resigned the secretaryship on account of his moving to Worcester, Mass.

Dr. I. H. Neff was elected secretary and treasurer.

The following gentlemen were proposed to and elected for membership: Dr. H. R. Niles, Flint, Mich.; Dr. Albert M. Barret, Independence, Iowa; Dr. Arthur McGugan, Kalamazoo, Mich.

The evening session was opened at 8.15. There were present:

Members of the Association.—Dr. William A. Stone, Kalamazoo, Mich.; Dr. H. Ostrander, Kalamazoo, Mich.; Dr. H. D. Statler, Kalamazoo, Mich.; Dr. Arthur McGugan, Kalamazoo, Mich.; Dr. George C. Boody, Independence, Iowa; Dr. Grant G. Speer, Traverse City, Mich.; Dr. Jason Morse, Pontiac, Mich.; Dr. I. H. Neff, Pontiac Mich.; Dr. A. L. Warner, Kankakee, Ill.; Dr. W. G. Stearns, Kankakee, Ill.; Dr. Adolf Meyer, Kankakee, Ill.; Dr. H. R. Niles, Flint, Mich.

Guests.—Dr. William M. Edwards, superintendent of the Kalamazoo Asylum; Dr. H. B. Osborne and Judge A. J. Mills, trustees of the asylum; Dr. A. Hockstein, Dr. C. A. LaCrone, Drs. Robertson, Innes, Clark, McNare, Ames, Van Zwolunberg, and Snook.

The subject of the discussion of the meeting was "Degeneration and Its Study Among the Insane."

Dr. Adolf Meyer read a "Review of the Physical Signs of Degeneration."

Dr. George Boody gave a review of the "Deformities of the Jaws," based on his work done on the subject in connection with Dr. Talbot.

Dr. Ostrander demonstrated several interesting casts of palates of patients in Kalamazoo.

Dr. Neff next read a paper on "Some Cases Illustrating Physical Signs of Degeneration."

Discussion of preceding papers was general.

Dr. Boody suggested that a plan should be devised which would enable the members of the association to make uniform investigations of the signs of degeneracy among the patients and among the insane. This question was referred to the executive committee, and the meeting was closed.

THIRD SESSION—OCTOBER 25, 1895, 9 A. M.

1. The committee found best that the by-laws and constitution should not be changed with regard to the membership; but a resolution was suggested to the effect that the membership in this association be not limited to any one section of the country, but that we invite and welcome to it members of hospital staffs from all parts of the country. The further proposition was made that for the next meeting special and urgent invitations be sent to the individual members of the hospital staffs of Indiana, Ohio, and Wisconsin. It is understood that all membership is individual.

These propositions were seconded and accepted.

2. Concerning the plan for a study of degeneration, it was proposed to have the papers read arranged so as to form a preliminary outline, and pub-

lished at an early date. More definite plans could be laid down at the next meeting, after the methods have been tried.

This proposition was discussed and accepted.

Dr. Warner read a paper on "The Bodily Weight in Melancholia." In the discussion, which was general, special attention was paid to the question of artificial feeding and its indications and contra-indications.

The papers of Dr. Boody, "A Case of Rupture of a Kidney"; of Dr. Neff, on "The Use of Electricity in the Treatment of the Insane"; of Dr. Morse, on "Two Cases of Degenerative Insanity"; and a communication of Dr. Meyer, on "A Case of Sulfonal Poisoning," were read in title only, owing to lack of time.

As the place of the next meeting — Independence, Iowa — was announced, following invitation of Dr. G. H. Hill, the superintendent of the Independence Hospital for the Insane, Dr. Doolittle was announced as president.

After a vote of thanks to Dr. Edwards and to the staff of the Kalamazoo Asylum, the meeting adjourned.

CORRESPONDENCE.

We have received the following communication from Dr. D. E. Hughes, chief resident physician of the Philadelphia Hospital :

THE INDIGENT INSANE IN PHILADELPHIA.

It has ever been one of the misfortunes of many who have worked honestly in their particular field of duty to have the earnest and more or less successful efforts of years ignored by those unfamiliar with the facts, but who have gained the public ear, through the "press" or the "magazine," in the attempt to foster themselves with the public as reformers. To some of these, often heretofore unknown, writers, reputations, results, and facts count as naught if they in any way conflict with their preconceived views, or the objects wished to be attained by their paper. The destroyer of reputations, however, has long since been given his place in the minds of honest people. These are some reflections resulting from a perusal of an article in the October number of the *North American Review*, by Dr. Henry Smith Williams, entitled, "Politics and the Insane."

All that Dr. Williams says concerning the condition of the indigent insane in New York and in Chicago may be true, and if so is an awful reproach upon those communities; but the failure of these or other cities to comply with the claims of humanity in the care of the indigent insane does not justify an untruthful attack upon the insane department of the Philadelphia Hospital, as contained in the following extract from the article mentioned:

The practical results of the political methods of caring for the indigent insane of Philadelphia may be told in a few words, which I quote from a personal letter, written by one perfectly familiar with the facts: "The present system consigns the insane to wretched, crowded, dark buildings, that have been odious and odorous for half a century, with no facilities for suitable out-of-door exercise or occupation. The plans and grounds of the asylum belong to a period long past, and within the buildings the allowance of fresh air equals but a few square feet per patient. All in all, the condition of the insane here is one of the saddest spectacles to be seen in this country. Yet the politicians have obstinately resisted every effort for improvement."

The writer has had charge of the insane department of the Philadelphia Hospital for nearly six years, and most emphatically pronounces every word and line of the above quotation untrue.

It has become quite a fad in recent years for several Philadelphians, whom the public respect for their honesty and fair play, to refer to the Philadelphia Hospital as it *may* at one time have been, and not as it *is* to-day. These individuals can not think it possible that while they have developed and grown, "Old Blockley," too, has felt the spirit of the times, and also grown and developed, and that, too, without their aid or, in fact, knowledge, and yet candor compels the assertion.

The consulting staff of the insane department of the Philadelphia Hospital is composed of the following well-known and distinguished neurologists and alienists, who have sent the directors of the hospital the letter following, viz: Dr. Charles K. Mills, Dr. Wharton Sinkler, Dr. F. X. Dercum, and Dr. J. Hendrie Lloyd:

PHILADELPHIA, November 12, 1895.

To the Directors of the Department of Charities and Correction:

GENTLEMEN: The attention of the neurological staff of the Philadelphia Hospital has been called to an article in the *North American Review* for October of this year, in which certain statements are made which reflect on the condition and management of the insane department. As this is a part, officially, of the neurological department, we feel it our duty to express to your board our sense of the falsity and injustice of these statements. As we have all been for a number of years connected with the hospital, and as our duties have necessarily made us familiar with the construction and sanitary arrangements of the buildings, the care and treatment of the patients, and the conscientious fulfillment of their duties by the directors, superintendent, and physician-in-chief, we feel that we are in a position to condemn, in the strongest language, the unfounded aspersions which have been made by one who is certainly uninformed as to the facts about which he writes, and who is evidently willing to accept without verification the statements of a correspondent who is ignorant as to the present condition of the hospital. The directors and officials have been untiring in their efforts in behalf of the insane. As a staff we have been uniformly supported in our efforts, humane and scientific, to advance the standing of the hospital.

Very respectfully yours,

CHAS. K. MILLS,
F. X. DERCUM,
WHARTON SINKLER,
JAMES HENDRIE LLOYD.

The following extract, from the report of Hon. Mahlon H. Dickinson, president, and Hon. Cadwalader Biddle, secretary and general agent of the Board of Public Charities of Pennsylvania, sustains the writer in his assertion of the untruthfulness of the foregoing extract from the *Review*.

The undersigned, on October 30, 1895, made their annual visit of inspection to the Philadelphia Almshouse.

* * * * *

The premises occupied by the insane have been, for the most part, recently erected, and upon plans approved by the Committee on Lunacy of the Board of Public Charities. Ample provision for light and ventilation was the first consideration of the committee, and these have been satisfactorily attained. The older buildings for this unfortunate class have been modernized, and supplied with all the appliances deemed necessary for the successful treatment and care of the insane.

* * * * *

The insane department is under the management of Dr. Daniel E. Hughes, the chief physician of the almshouse, and his assistants, and has a corps of eighty-eight male and female trained nurses.

Our visit of inspection to this institution was, as usual, made without any notification of the officials. Hence it was found in its general condition, and it reflected great credit on Mr. Charles Lawrence, the superintendent, and his subordinate officials and employes. Indeed, Mr. Lawrence has shown himself, in our opinion, preëminently qualified for the office he fills, and we believe him to be "the right man in the right place."

(Signed) MAHLON H. DICKINSON,
President.

CADWALADER BIDDLE,
Secretary and General Agent.

The following extracts from a report of the chairman and secretary of the Committee on Lunacy of the Board of Public Charities of Pennsylvania is presented with feelings of pride:

PHILADELPHIA, November 5, 1895.

HON. MAHLON H. DICKINSON, *President Board of Public Charities of Pennsylvania:*

DEAR SIR: The Committee on Lunacy have been requested to examine into the present condition of the insane department of the Philadelphia Hospital, Blockley, and to report to the Board of Public Charities. The committee having carefully inspected that department, respectfully present the following report:

"On November 4, 1895, there were present in the department for insane 1,132 patients, or 570 men and 562 women. These, being wholly drawn from the poorer classes of a large city, are more difficult to manage than the average State hospital population, and present, physically and mentally, very poor material for cure or relief. Notwithstanding this fact, the percentage of recoveries on the whole number treated, for the year just closed, was $8\frac{1}{2}$ per cent; on the number admitted during the year, 28 per cent. In the State hospitals of Pennsylvania, in 1894, the percentage of recoveries on the whole number treated was 4 per cent; on the number admitted during the year, $21\frac{1}{2}$ per cent. These results require no comment.

* * * * *

"It has been stated elsewhere that the air space per patient in this hospital

is very inadequate. This is not true. The unusual height of ceilings, width of corridors and ample proportions of single rooms and dormitories in these buildings, with a good system of ventilation, affords larger air space per patient than is found in the average general hospital. All the water closets and bath rooms are placed in towers or projections built outside the wards. These are well ventilated, perfectly clean and free from odor, and are supplied with excellent fittings and an automatic flush of water.

"All the patients sleep upon wire-woven mattresses, on neat iron bedsteads, supplied with good warm clothing. * * * The quieter patients sleep in large congregate dormitories, which are entirely vacated during the day, the patients, when not in the open air, occupying large day rooms. The ceilings in most of the wards, corridors, day rooms, and dormitories are from thirteen to sixteen feet high.

"The newer wards have always been excellent, but during the last few years all of the older wards have been torn out to the very walls and refitted in modern form, so that now these compare very favorably with the newer portions of the buildings.

"The patients take their meals in one of the finest and best equipped congregate refectories in this country, connected with serving rooms and a main kitchen of great size, and fitted with the most approved appliances for institution cooking. This group of buildings is of recent construction. * * * Of the 1,132 patients about 900 regularly use this dining hall. On the day of our last visit there were 897 at dinner. * * * The general cleanliness of the wards is admirable; there are no bad smells, no dirty corners nor closets, no collection of rubbish. All spare clothing is neatly put by in clothes-rooms. The patients are bathed regularly, under supervision of physicians; are kept clean, and their clothing is warm, tidy, and comfortable.

* * * * *

"In good weather the wards are quite deserted, except for the sick and feeble, the patients being most of the time in the open air. * * * All the patients who are able to be out have considerable yard space in which to exercise.

"We know of no public hospital for the insane in this country that has a better medical staff or a better medical service than has the department for insane of the Philadelphia Hospital.

* * * * *

"The supplies of diet, drugs, medicines, and appliances are unrestricted and are subject to the requisition of the physician-in-chief. Politics are absolutely disregarded in the selection of physicians, and in the employment of attendants and employes. Character and fitness for duty are the sole requirements to obtain and retain an appointment or a position. Much to the contrary has been unfairly alleged. It might have been so at one time; it is so no longer.

"The entertainment, occupation, and useful (as well as directly profitable) employment of the insane patients are now, and long have been, special features of the administration of this department of the Philadelphia Hospital. * * * All the clothing used by the insane, both under and

outer, with the exception of shoes, stockings, and hats, is manufactured by the patients in the tailor shop and in the sewing rooms and circles in the wards. This employs both men and women. The men also conduct a brush shop, where a large quantity and great variety of excellent brushes are produced, far in advance of the requirements of the institution. * * * Other shops are to be opened soon for the making of brooms, whisks, mats, rugs, etc., as soon as accommodations can be furnished. * * * All the domestic work is done by the patients, and much miscellaneous jobbing. * * * On the date of our recent unannounced and unexpected visit there were usefully employed 514 insane patients, or 232 men and 282 women, or over 45 per cent of the patients.

* * * * *
 "The buildings are heated partly by direct, partly by indirect, radiation of steam, and are always comfortably warm in winter. The direct radiator stacks or coils are carefully protected by heavy wire screens, fixed in place, but capable of being moved. * * *

"This report, which is based upon repeated personal inspections by the Committee on Lunacy, was called forth by the injudicious, unjust, and untrue publication which recently appeared in a justly popular periodical. There are many citizens and many of the medical profession who appear to content themselves with the remembrance of what 'Blockley' used to be, rather than take the trouble to visit it now and see what it has become under the leadership of the present Bureau of Charities of Philadelphia, and under the control of the present superintendent, Mr. Charles Lawrence, and Dr. Daniel E. Hughes, the present excellent chief resident physician, and of the medical staff at large. The present improved state of the department for the insane could never have been attained without the thorough coöperation and determination of those in control and those in immediate charge. The results have only to be seen to be fully appreciated and highly commended. The improvement has steadily advanced, and will doubtless continue from year to year. It is true that the insane poor of this city should be quartered in a new and modernly appointed hospital, on a rural site, with a large farm and gardens attached; but this is not to be attained by insisting upon untrue statements, nor by refusing to see that the most is being made of the present site and of the means now at hand. This report has shown that the insane poor of this city are as well cared for at 'Blockley,' in the present improved state, as are the patients in any other public hospital in Pennsylvania.

"Respectfully submitted,

"(Signed) GEORGE I. MCLEOD, M. D., *Chairman.*

"HENRY M. WETHERILL, M. D., *Secretary.*"

If it were not for want of space in this article, the entire report of the Lunacy Committee would be given, instead of only such portions as refer to the particular libel published in the *Review*.

The following extracts are taken from an editorial published in the *Medical News* of November 23, 1895:

Under this title ("Politics and the Insane") Dr. Henry Smith Williams has contributed a popular article to the *North American Review*, in which he

makes an indiscriminate attack upon the management of the insane by the "politicians." The tenor of Dr. Williams' article is in accord with that of a species of writing now rather common, in which there is a tendency to decry anything that is suggestive of "politics." In a country so devoted to politics as our own—one, in fact, whose institutions are essentially founded on popular government—this outcry against everything political has seemed to us illogical and unwise. It is not only dangerous to the country at large, but sooner or later leads those who indulge in it into reckless misstatements of facts and into a pharisaical condition of mind which unfits them for forming impartial judgments. Dr. Williams' article suggests these thoughts both by its tone and by its matter.

We are not concerned here, however, with anything that Dr. Williams has written, except his unjust onslaught upon the present management of the Philadelphia Hospital. He has evidently taken no pains to make a personal inspection of the institution or to verify his alleged facts, but has relied largely upon a letter from an unnamed writer, whose statements, to say the least, are highly colored.

* * * * *

The exact facts about the present management and condition of the insane department of the Philadelphia Hospital are far other than those described in these exaggerated and misleading statements. After the disastrous fire of a few years since, the old buildings for the insane were largely rebuilt and entirely renovated. New wings and additions, including a model kitchen, have since been erected, and the whole atmosphere and appearance of the institution have been changed. The new additions, costing \$229,000 (more than a quarter of a million dollars), were erected three years ago, and have been pronounced, by competent judges, satisfactory in every way. * * *

This hospital has what no other State hospital has in equal degree, sitting rooms for day, distinct from sleeping rooms at night. It has a splendid dining hall, 220 x 100 feet. * * * It has larger airing-courts than any State hospital, although, of course, it is without much land for farming or trucking. Over 50 per cent of the patients are usefully employed.

This hospital takes from the dregs of a great city, and its population in consequence is physically much below that of the State hospitals; yet its patients make almost all their own clothing, for both men and women, and in addition there are shops for making brushes and repairing shoes. Finally amusements are given regularly in a large assembly room.

The condition of the insane is always a sad spectacle, but it is no sadder at the Philadelphia Hospital to the eye of a true alienist and lover of justice than it is in any gilded asylum in the land.

* * * * *

We do not hesitate to say that the insane department of the Philadelphia Hospital, under its present management, compares favorably in cleanliness, hygienic conditions, and general welfare of its patients with any State hospital, and that the authorities, who have had much to contend with, including popular prejudice, are deserving of great credit for what they have accomplished. The truth is, this hospital suffers from a bad reputation which it acquired years ago, before the improved management under the new city

constitution made it what it is to-day. Dr. Williams and others, who, like him, do not take the pains to verify their "facts," simply repeat old calumnies which no longer have a basis.

The Philadelphia Hospital is a great public charity, which for years has been one of the most important centers for teaching and for medical science in this country. Those who criticise it should at least make themselves familiar with the facts.

* * * * *

Because these abuses abound in New York and Chicago, it does not follow that they occur in Philadelphia, and no upright judge will claim they do occur at present in the Philadelphia Hospital.

The *Review* article brought many letters from those who are familiar with the changes of late years in the condition of the hospital in question, but the testimony here given must convince the readers of the JOURNAL that both Dr. Williams and his unknown correspondent have done a gross injustice to a great public charity, for which there can be no possible excuse, and will cause the knowing ones to question how much truth there is in any of his statements concerning the other hospitals he so unmercifully condemns. "False in one, false in all," is a familiar quotation that occurs in this connection.

We have been favored with the following correspondence, which explains itself:

BOSTON LUNATIC HOSPITAL, No. 39 NEWBURY STREET,
BOSTON, November 17, 1895.

Editors American Journal of Insanity:

GENTLEMEN: The following correspondence explains itself. If you do not care to print it entire you can use such parts as you choose:

BOSTON, October 20, 1895.

DR. EDWARD COWLES, *Superintendent McLean Hospital:*

DEAR DOCTOR: In pursuance of my intention, expressed some time ago, I now write to ask your advice. After fifteen years of persistent effort I have seen my plans for the proper care of the insane of Boston largely successful. While taking some credit for this success, perhaps I am to blame for their partial failure. We can now care for nearly half of the city's insane. I am now in charge of the hospital department only. It was planned for the treatment of 170 curable cases, and it has, to-day, only two patients of this class, being entirely filled with chronic cases. All the recent cases still go to the State hospitals as formerly. The group still lacks an administration building and superintendent's residence, and the grounds are in their original condition of pasture land.

Perhaps I have unconsciously passed the limit of my usefulness to the city. I am only fifty-eight years old, and do not feel any diminution of strength due to age. It is a difficult question, however, for a man to determine when he should retire from public service. Perhaps some one else should plan the remaining buildings to be constructed here. The interests involved are official, and family as well as personal, and I feel the responsibility of deciding to be great.

Will you please call on Dr. Jelly and, in the absence of Dr. Rowe, on Dr. Quinby to advise with you in the matter?

Yours very truly,

THEO. W. FISHER.

McLEAN HOSPITAL,

SOMERVILLE, MASS., October 24, 1895.

DEAR DR. FISHER: I have been considering the matter of your letter, and recent conversations with me, referring to the intention you have had in mind for some time of giving up hospital work.

In accordance with your request, that three medical consultants should join in giving you impartial advice in a friendly way, I have complied with your wish that Dr. Jelly and Dr. Quinby, in the absence of Dr. Rowe, should consider the matter, together with myself. But Dr. Quinby not being readily available, Dr. Jelly and I, with your approval, have conferred upon the questions you have asked.

We appreciate what you say of the difficulty in deciding so important a matter under the circumstances and obligations that concern yourself and family and your official position, and involves a great responsibility.

With our observations of what seems to us desirable and expedient in reference to your health in recent years and those to come, and from what you have told us in regard to your health and business affairs, we do not hesitate to advise you that the plan entertained by you in the last year or more, for retiring to a mode of life that is likely to prolong it for you, is the plan for you to adopt.

It is with great regret that Dr. Jelly and I contemplate your retirement from the field of your active hospital work after so many years of honorable usefulness, and we heartily join in wishing you many years of enjoyment of the fruits of your labors.

Very sincerely yours,

EDWARD COWLES,
GEORGE F. JELLY.

I accordingly resigned at once. On November 10th a farewell reception was held in the chapel at Pierce Farm. An autobiographical sketch was read by the retiring superintendent. Many friends were present, and a dinner service presented in an eloquent address by a lady patient.

Yours very truly,

THEO. W. FISHER.

NEW YORK, November 6, 1895.

Editors American Journal of Insanity:

MY DEAR SIR: The October number of the *British Journal of Mental Science*, in commenting editorially on the report of a committee of the Medico-Legal Society of New York, on the amendments proposed to the law of commitment of the insane in the State of New York, says, speaking of the report:

It recommends that no order for the commitment of a lunatic — reception order, as we should style it — shall be made until after *a trial by jury*, at which the lunatic *must be present*, unless the judge otherwise directs, and must be *represented by counsel*.

And the article proceeds to characterize the report and the action of the committee as “monstrous,” “grotesquely absurd,” “preposterous,” etc.

The article was written under an entire misapprehension as to the facts, and as to what the report contained.

No recommendations of the kind stated were made in the report.

The report contained the amendment proposed by Mr. Albert Bach in *extenso*, and the act of the Legislature as it now stands on the statute books of that State.

The following resolutions were unanimously adopted at a regular meeting of the Society :

1. *Resolved*, That the present law is faulty in permitting any citizen to be committed and confined in an asylum, public or private, or in any institution, home, or retreat for the care and treatment of the insane, upon the mere certificate of two physicians under oath.

2. *Resolved*, That such a commitment made in this manner, before it has been approved by a court or judge of competent jurisdiction, is in direct violation of the organic law of the State and of the United States.

3. *Resolved*, That the qualifications specified in the law, as it now exists, as to the competency of the certifying physicians, requiring only three years' actual practice of his profession, and without requiring evidence of his experience in or practical knowledge of insanity, are entirely inadequate to protect the liberty of the citizen.

4. *Resolved*, That the statutory qualifications of the certifying physicians, as now stated in the law, would not be sufficient to enable said physician to testify as an expert in a court of justice where the question of insanity was at issue.

5. *Resolved*, That, in our opinion, confinement of the insane in an asylum is not necessary, beneficial, or even prudent in all cases; and that before a judge signs a warrant of commitment the law should require him to be satisfied, by competent evidence, that the insane person, if at large, would be dangerous to himself or others, or that treatment in an asylum would be beneficial to him.

6. *Resolved*, That in all cases of doubtful insanity, judges, before signing warrants of commitment for insane persons, should assign counsel for the alleged lunatic when he is not otherwise represented.

7. *Resolved*, That, in our opinion, in the matter of commitment of the insane, the duty of medical men should be limited to giving medical evidence, and the responsibility for the commitment should rest upon the judge, and not upon the physician; that the medical profession has greatly suffered in public estimation by the practical working of the existing law, which throws upon the certifying physicians the opprobrium of unfortunate or ill-advised commitments.

The committee made no such report as is stated in the *Journal of Mental Science*.

It, in fact, refused to recommend the amendments in that regard, as proposed by Mr. Bach, and it is difficult to imagine how such an error could have been made in a journal of such high character as the *Journal of Mental Science*.

I inclose, under separate cover, the full report of the committee, and as the *Journal of Mental Science* is a quarterly, and no issue will appear for some time in which the correction could be made in that journal, I deem it only proper to call your attention to the error in order to prevent its wider circulation unexplained.

I remain, dear sir, very faithfully yours,

CLARK BELL,
Chairman of Committee.

HALF-YEARLY SUMMARY.

The SUMMARY for January, 1896, presents the usual indications of advancement and progress taking place in our American institutions. The most noticeable and gratifying feature of current events is the movement for MORTUARY BUILDINGS and LABORATORY EQUIPMENT. What was once exceptional in this line, if not already a matter of course, is coming to be so. It has been a long and hard struggle to educate State legislatures to a sense of the value and importance of pathological work and laboratory equipment, but soon we predict separate buildings for this purpose will be provided quite generally. We record steps in this direction in the present SUMMARY in Maryland, New York, Washington, and Indiana, for the illustration of the latter of which Dr. Edenharter has furnished the necessary cuts.

The principle of STATE CARE is progressing, as shown by reports from California, Iowa, and Indiana.

INDUSTRIAL BUILDINGS are being added in many States, as Iowa and Colorado.

Addition of MEDICAL INTERNES to the regular staff is recorded in New York, Michigan, and Illinois. This is a movement of great value and importance.

New institutions are provided for in many States. Illinois has appropriations for the erection of two.

It is to be regretted that the Republican party, in coming into power in Kentucky, seems to force upon the Governor a political overturning in all the State institutions. The JOURNAL would like to see Governor Bradley insist on retaining all meritorious officials and employes.

Several institutions have very creditable printing equipments. The hospitals of Iowa, at Independence and Clarinda, send out, regularly, a monthly magazine with much spicy and well-chosen material, calculated to interest its readers. Gala numbers of each were printed for the holiday season. The printing office at Utica is famous historically and otherwise.

CALIFORNIA.—*State Asylum for the Insane, Napa.*—At the last election of officers for this asylum the entire medical staff, consisting of Dr. A. M. Gardner, resident physician, and Drs. L. F. Dozier, G. R. Bowles, and Driesbach Smith, assistant physicians, was retained.

During the last four years there have been a number of important improvements made in the hospital buildings, among them being a commodious stone kitchen, which is separated from the main building. The expense incurred was paid out of the contingent fund, the rock was obtained from quarries belonging to the institution, and patient labor was largely employed in the construction of the kitchen. The cost was thus reduced to less than one-fifth of what it would have been had the work been performed by outside contract.

The old kitchen, butcher shop, etc., which were in the main building, have been fitted up for a ward and a tailor shop in which is made all the clothing worn by indigent patients. Home labor is utilized here also, with the most gratifying results, both in the matter of economy and in the beneficial effect of the regular employment upon the inmates. Three of the men, who were considered refractory and dangerous, have been steadily at work for the past seven months, and are now among the most happy, quiet, and contented of the patients.

During the past eighteen months 900,000 brick have been burned, and some of them used in the construction of a carpenter shop, 40 x 60, completely fitted with tools. Here is turned out almost anything in the line of ward furniture. At present the patients are constructing frames for 500 pictures for the wards.

An additional brick building for laundry purposes is in process of construction, and the old laundry is being remodeled, all being done by patient labor. A bowling alley and gymnasium, with shower baths, etc., are in contemplation.

Dr. Gardner believes that much more can be accomplished by the institution of the future in the line of self-support than is now attempted, and says that no possibility of development in that line should be left untouched, both on economic grounds and as a means of accelerating the recovery of the patient. Hon. Jas. H. Budd, Governor of California, is of the same opinion, and has addressed a circular letter to the State institutions containing the following paragraph:

"It is the Governor's desire that you report to him what, if any, products you raise, or goods or articles you manufacture, in excess of the needs of your institution, and what would be the cost of furnishing other State institutions with the same, making a reasonable allowance to your own therefor. This letter is addressed to the State institutions and officers in the belief that, through mutual effort and harmonious action, taxation may be lessened, economic measures encouraged, and the people of the State made to realize that their public servants are earnestly engaged in an effort to lighten their burdens and promote the public welfare."

—Nothing more important in California asylum matters has occurred for a long time than the meeting of the trustees and superintendents of the various institutions which was called by the Governor in the latter part of November. A thorough discussion resulted in the appointment of a committee consisting of the State Board of Examiners (the Governor, the Attorney-General, and the Secretary of State), one member from each of the boards of trustees (the member of each board to be selected by the individual board), and the superintendents. The committee is to devote the next year to a thorough investi-

gation and canvass of all matters connected with asylums, their government, etc., and it is believed that a bill can be presented to the next State Legislature providing for the uniform government and administration of asylum affairs.

ILLINOIS.—Rock Island has been made the location for the new Western Hospital for the Insane. The newly appointed trustees and the Governor met on December 9th, to consider the bids of the three competing places — Monmouth, Galesburg, and Rock Island — and decided in favor of the last-named city.

Rock Island gave 410 acres of land situated near the Mississippi River. Part of the chosen site (about 150 acres) is located upon a high bluff, overlooking the river and in view of the three cities of Rock Island, Moline, and Davenport. The remainder of the land is level. The amount of money at the disposal of the trustees is \$100,000, appropriated by the last Legislature.

The announcement that the East Moline, or Watertown, site had been chosen by the commissioners for the location of the new Hospital for the Insane was greeted with the ringing of bells, the sounding of the water-works whistle, and a general jollification by the citizens. The site is unquestionably the finest in the State.

The trustees of the Western Insane Hospital (created by the last General Assembly) are W. Selden Gale of Galesburg, John M. Eden of Sullivan, and Thomas Silvas of Rock Island.

—A State institution for the chronic insane has been located at Peoria.

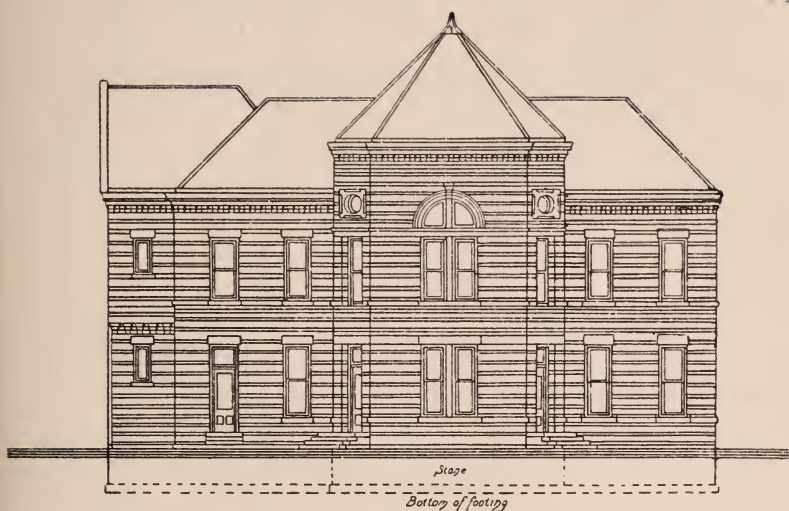
—Dr. W. G. Stearns succeeds Dr. Adolf Meyer as pathologist at the Kankakee Hospital, Dr. Meyer having resigned and taken a similar position at Worcester, Mass.

INDIANA.—*Central Indiana Hospital for the Insane.*—Although this institution received no special appropriation during the last fiscal year, the trustees were enabled to construct and equip a new kitchen in the department for men. A fireproof laundry was erected and furnished with the latest machinery; also an addition to the fire department, providing sleeping accommodations for thirty-five men (outside employes). The minor improvements have been many.

The most important addition to the hospital is a pathological department and mortuary in charge of a competent pathologist, of which the accompanying cuts give a good idea. When the medical service is reorganized it is the intention to hold daily meetings of the staff, to hear reports and consult about hospital cases in the apartment provided for this purpose. All specimens will be stored in this pathological department and properly labeled. The records will show previous and clinical history as well as the pathological development. The building will be equipped with all necessary facilities to meet the most exacting demand of pathological investigation, and physicians will be invited to be present at post mortems and to participate in the discussion concerning treatment of cases.

Dr. George F. Edenharter, superintendent, says:

“Our appropriation for maintenance and current expenses was \$85,000 for the fiscal year ending October 31, 1895, and all of this was expended with the exception of \$15.05. With an increased number of patients, and neces-

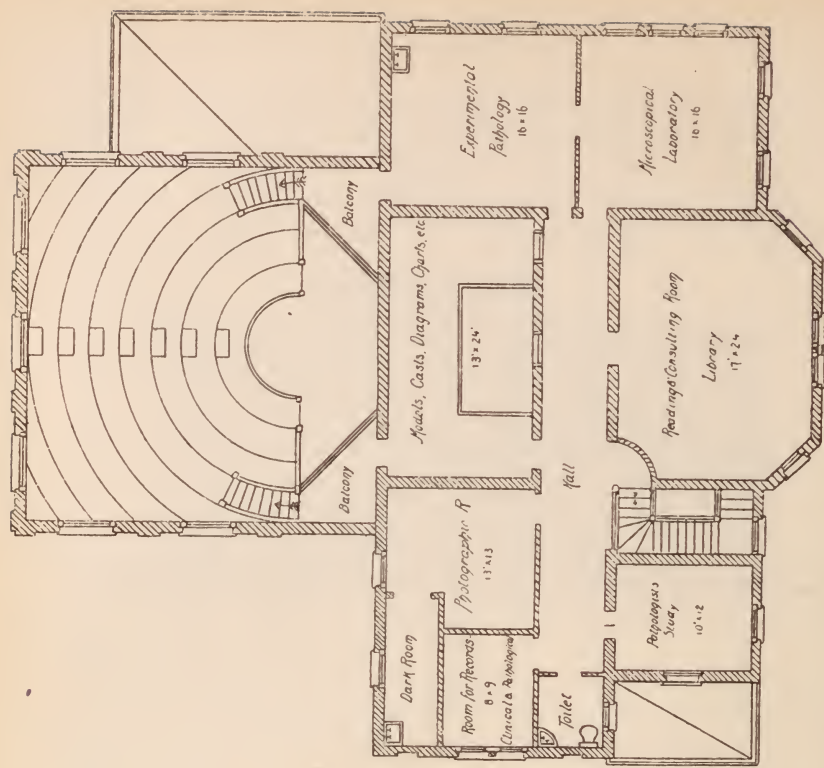
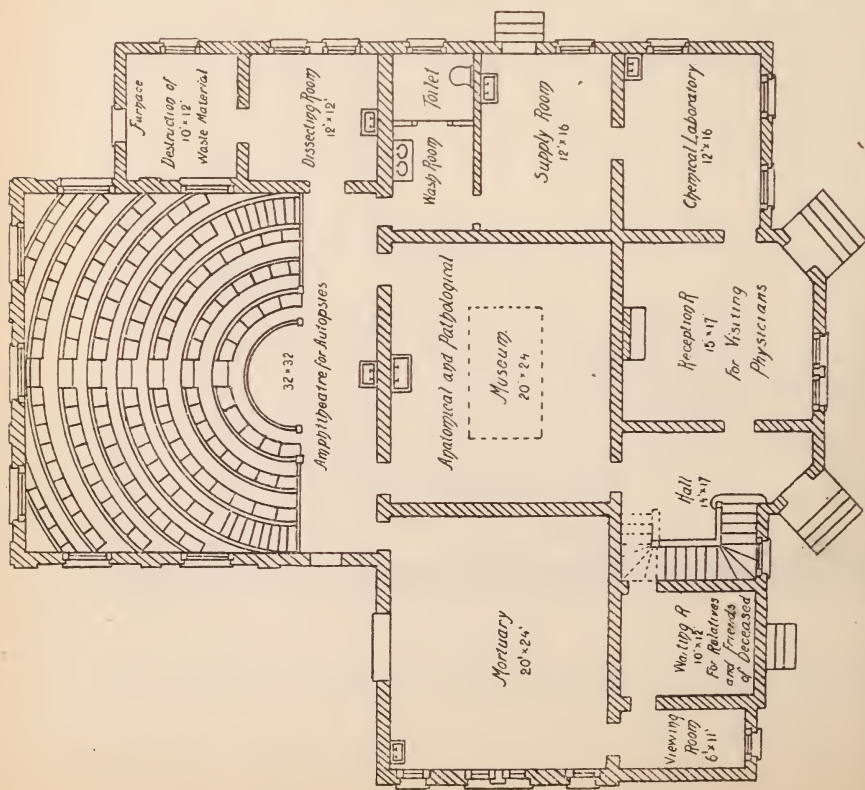


East Front



South Front

PATHOLOGICAL BUILDING, CENTRAL HOSPITAL FOR INSANE, INDIANAPOLIS, IND.



sarily an increase in expenditure, the General Assembly, in its wisdom, decreased this appropriation for the next two years, limiting us to \$76,500 for each fiscal year."

—*Southern Indiana Hospital for Insane, Evansville.*—An appropriation of \$30,000 was made available by the General Assembly of this year for enlarging the capacity of the hospital. The building is three stories with basement and attic, and is on the same general plan as the present building, with which it is connected at the northwest wing by a colonnade of three floors. The capacity of the addition will be 150 beds, and there are now on file more than 300 applicants for admission. The building will be ready for occupancy June 1, 1896. The contract price of \$30,000 includes everything except furnishing.

A very handsome portico of two stories, surrounding two sides of Administration Building, is nearly completed at a cost of \$2,800.

The interior of the house has been repainted, and the floors of all bath rooms and water closets relaid with encaustic tile. All windows needing it, nearly 600, have been weather-stripped.

Three hundred shade trees of the finest varieties have been replanted. These trees are two years of age and many of them are twenty feet in height and from two to three inches in diameter.

Several thousand feet of walks and roads have been added to the grounds, which are now well provided with avenues.

A new lake has been completed, finishing, for the present, our chain of lakes, four in number, and all of respectable size.

An additional line of water pipe was laid, so that the lawns, trees, and gardens have now an abundant supply of water.

The results from farm, garden, and piggery have been good, these animals being kept without cost to the institution.

Two large music boxes, one small magic lantern, a large stereopticon, and a gymnastic apparatus have been added to the equipment for the patients.

Dr. A. J. Thomas, superintendent, adds the following statement to his report:

Total number of patients admitted, discharged, and died during the fiscal year ending October 31, 1895:

Remaining over October 31, 1894—Men, 207; women, 217; total, 424.

Admitted during 1894-1895—Men, 44; women, 30; total, 74.

Total number treated during 1894-1895—Men, 251; women, 247; total, 498.

Discharged during 1894-1895—Men recovered, 17; men improved, 1; men not insane, 1; total, 19; women recovered, 8; women unimproved, 3; women not insane, 1; total, 12.

Died during 1894-1895—Men, 19; women, 12; total, 31.

Total discharged and died during 1894-1895—Men, 38; women, 24; total, 62.

Remaining over October 31, 1895—Men, 218; women, 223; total, 436.

Per cent of deaths on total number treated 1894-1895—6.2.

Per cent of recoveries on total number treated 1894-1895—5.2.

Per cent of recoveries on total number admitted 1894-1895—35.

Average number of men present during 1894-1895—199.

Average number of women present during 1894-1895—202; total, 401.

—*The Eastern Indiana Hospital for the Insane, Richmond.*—The Legislature of 1895 appropriated \$50,000 for increasing the capacity of this institution. It has been expended in the erection and equipment of a large general kitchen and two associate dining rooms. It will be remembered that this hospital was constructed on the cottage plan. The patients occupy twelve cottages, with a total capacity of 440 beds. Each cottage was equipped with a kitchen and dining room. After an experience of five years, the management has seen fit, in the interest of economy and convenience, to abandon the small cottage, kitchens, and dining room, except in infirmary cottages, and to erect associate dining rooms and a large general kitchen. The small dining rooms will be converted into day-rooms and dormitories, thereby increasing the capacity about 125 beds. The new building will be ready for occupancy at the beginning of the new year.

Dr. W. S. Tomlin, junior assistant physician, has resigned to enter general practice in Indianapolis. The vacancy was filled by the appointment of Dr. F. F. Hutchins of Indianapolis.

The law enacted by the last Legislature, in which there is an explicit recognition of the merit system in the management of the charitable institutions, is proving in its operations eminently satisfactory. While Indiana's benevolent institutions have not, during many years, been seriously disturbed by political interference, the embodiment of this fundamental principle of successful management into statutory law is a long step in the right direction, is wholesome and there is even now apparent a sense of protection about the institutions heretofore unknown.

Dr. S. E. Smith, the medical superintendent of this hospital, as chairman of the Committee on the State Care of the Insane, at the annual conference of Indiana Charities and Corrections, recently held at Fort Wayne, read a paper upon the "State Care of the Insane," in which was advocated the need and wisdom of State provision for all the indigent insane. It was shown that the increase of insanity in Indiana, during the past decade, was only relative and not actual. The proportion, ten years ago, was one insane to 600 of population and it is now the same. Under existing laws three of the four hospitals do not discharge patients until recovered, while one *may* discharge chronic cases to make room for recent cases. Legislation has been generally in the direction of State care, and it seems that the day is not far distant when Indiana will have a complete system of this kind of care. Even now there are only 350 patients in the State unprovided for, and an outlay of \$100,000 will make the desired provision for this number.

With the firm establishment of the merit system upon a legal basis, supported by popular approval, and an encouraging prospect of an early completion of a State-care system, the future of Indiana's hospitals for the insane is certainly bright.

IOWA.—*Iowa Hospital for the Insane, Independence.*—The staff of this hospital has recently been reorganized on account of the resignation of the first assistant, Dr. M. Nelson Voldeng. Dr. Voldeng and the third assistant, Dr.

Jacob W. Wells, have given up hospital work in order to study in Germany. Dr. John C. Doolittle, formerly second assistant, has been promoted; Dr. George Boody, formerly assistant at the Illinois Eastern Hospital for the Insane at Kankakee, is second assistant; Dr. Albert M. Barrett, a recent graduate of the medical department of the Iowa State University, is third assistant physician and pathologist; Dr. M. C. Mackin, who had been druggist for one year in this institution, is now fourth assistant physician.

During the past year the hospital has been supplied with a slaughter house having cold storage attachment.

—*Iowa Hospital for the Insane, Mount Pleasant.*—Since the last issue of the JOURNAL this hospital has completed an industrial building for men which will include carpenter shop, broom shop, mattress shop, boot and shoe shop, and room for repairing tinware, together with a drying room for lumber and storage. Several wards and apartments of the asylum have been recently decorated.

—*Iowa Hospital for the Insane, Clarinda.*—Dr. C. A. Drew, first assistant physician, resigned October 1st, and enters practice in Des Moines, Iowa. Dr. H. E. Markham, second assistant physician, resigned October 1st, and enters practice in Storm Lake, Iowa. Dr. Charles F. Applegate, third assistant physician, was promoted to first assistant physician. Dr. Anne Burnet of Aurora, Ill., late of Kankakee Hospital, was appointed second assistant physician. Dr. Alfred T. Gundry, late of the Gundry Home, Baltimore, was appointed third assistant physician.

—*New Hospital for Insane.*—The commission for locating and building the new hospital at Cherokee, in Northwestern Iowa, held a meeting recently to look over plans for rear center and boiler and engine house. The commission, as originally appointed, was as follows. In the law passed authorizing the new hospital, the superintendents of the three hospitals already in operation in the State were ex-officio named as members of that commission and three additional members were to be appointed by the Governor. The six commissioners were as follows: Col. Jed Lake, Independence, Iowa; Gen. Ed. Wright, Des Moines, Iowa; Hon. W. G. Kent, Fort Madison, Iowa; Dr. H. A. Gilman, superintendent Hospital for Insane, Mount Pleasant, Iowa; Dr. G. H. Hill, superintendent Hospital for Insane, Independence, Iowa; and Dr. F. C. Hoyt, superintendent Hospital for Insane, Clarinda, Iowa. General Wright, after serving faithfully as commissioner, died last week, and Hon. E. H. Conger has been appointed by the Governor to fill the vacancy.

The commissioners hope to expend \$100,000 a year upon this new institution, and to have a portion of it ready for occupancy within four or five years. Contractors are asked to make bids for laying the foundation walls during 1896. Both the outgoing and incoming Governors are in favor of State care for all the insane.

KENTUCKY.—A radical change may be expected in the management of all the charitable institutions of this State, as the first Republican Governor was installed December 9, 1895.

—The Western Kentucky Lunatic Asylum has completed a very satisfactory system of water works.

—Substantially built additions to the Central Kentucky Asylum make the present capacity of that institution more than 1,500.

—The Eastern Asylum has recently erected an addition which accommodates more than 100 patients.

MARYLAND.—*Maryland Hospital for the Insane, Spring Grove.*—Dr. Rohé, superintendent of the Maryland Hospital for Insane, in his annual report for the current year, says:

The difficulty in securing a suitable site for the additional hospital authorized by the General Assembly at the session of 1894, has continued to crowd the hospital beyond its normal capacity. In spite of additional accommodations made by fitting up the bowling alley as a ward for colored women, applications for admission must be declined almost daily for want of room.

During the year a new mortuary room has been fitted up, and the bowling alley, as above stated, has been converted into a ward for patients. The parking of the wooded portion of the grounds, and the regrading and widening of the roads, has been continued. Nearly all of this work has been done by the regular employes and the patients.

The percentage of recoveries on the total number under treatment during the year was 6.6 per cent; on the total admissions 38.8 per cent, and on the number of cases where the disease had existed less than one year before admission, 81.3 per cent.

These figures agree substantially with those given in last year's report.

The large recovery rate on the cases admitted soon after the outbreak of the disease emphasizes the great importance of early treatment in insanity, as in other diseases.

Twenty-six patients (twelve males and fourteen females) died during the year, a mortality rate of 4.68 per cent on the total number in the hospital during the year, and of 5.52 per cent on the daily average population. This death-rate is, I believe, the lowest recorded since the foundation of the hospital, and is exceptional among institutions for the insane throughout the world. This gratifying result is, in large measure, due to the careful and painstaking attention of the medical staff.

In the last annual report I referred to the diminished death-rate from pulmonary consumption in the hospital, and expressed the hope that a further decrease might be recorded during the current year. By the exercise of constant vigilance in limiting opportunities for infection, this result has been attained. In table 17, the deaths from consumption (phthisis) are set down as six, most of them being verified by post-mortem examination. This would give a rate of 23.1 per cent of the total deaths as due to this disease, a slight decrease from last year. If, however, we exclude, as I think we properly may, one case that came to the hospital with advanced tuberculosis of the throat and lungs, our tubercular death-rate for the year is reduced to 19.2 per cent, which is probably the lowest ever reached in an institution of this character.

[In connection with the death-rate we may add: We think Dr. Pliny Earle has reported a lower death-rate, and the Illinois Eastern Hospital for the Insane at Kankakee, in its report for two years ending June 30, 1890, gives the death-rate on the average number present as 5.3, and on the whole number present, 3.1. The death-rates of different hospitals would make an interesting comparative study.—ED. JOURNAL.]

—Dr. Gundry of Harlem Lodge, Catonsville, writes of a very busy year, and says that he now has thirty patients under his care. During the past twelve months he has tried the cottage plan with such good results that he is now erecting another building containing three rooms and a bath.

MASSACHUSETTS.—Dr. W. L. Worcester has been engaged as pathologist to the Danvers Hospital, and Dr. Adolf Meyer, formerly of Kankakee, as pathologist to the Worcester Hospital.

MICHIGAN.—*Michigan Asylum for the Insane*.—George F. Inch, M. D., of Oak Pointe, New Brunswick, and E. H. Robertson, M. D., of Ogden, Mich., both graduates of the Michigan University, of the Class of 1895, have been appointed internes in the asylum for a period of one year, dating from October 1, 1895. With this addition to the medical force more time is allowed for special work in bacteriology, microscopy, and other directions. The medical staff meets daily at a stated hour and all new patients, so far as possible, are brought before the staff for an examination.

Six men and eight women have finished the two courses prescribed in the Asylum Training School, and have been granted certificates of proficiency by the board of trustees, and graduated as the Class of 1895. The training school is again in session and is more largely attended than during any previous year. There is an earnestness and enthusiasm in the classes, both junior and senior, that portend good results. An expert woman teacher of massage and mechanical movements has been engaged and is giving a course of sixteen lectures to the senior students in this special branch. These lectures are each accompanied by practical demonstrations in the asylum hospital.

The new system of water supply from an elevated tank in the water tower has been in use for some time, and is satisfactory. The tank is sufficiently elevated so that a static head for fire purposes is obtained, and, with a reserve of 250,000 gallons and water mains around the buildings with frequent hydrants, there is better outside protection against fire than has ever been had heretofore at this institution.

With the construction of a central heating and power plant, buildings in the rear of both the male and female departments, formerly used as boiler houses, were vacated. The one at the male department has been converted into a common dining hall, and into rooms for engineers, teamsters, and other employes. A tile floor has been laid in the dining room and it has been fitted up in an attractive manner. One hundred and sixty-five patients take their meals there, and as it is immediately in the rear of the kitchen at the department for men, the advantage of serving food hot from the kitchen is obtained. The ward dining rooms vacated by this change have been fitted into dormitories and additional room made for twenty-five more patients.

The building at the female department for the kitchen and laundry employes has lately been added to and remodeled.

Plans have been drawn for a detached building for men. This building is intended for the paralyzed, feeble, helpless, and untidy patients, and is mainly a one-story structure, consisting of a large day room, dining room, solarium, and dormitories, with all the necessary accessories. A part is to be two stories in height, the upper portion containing rooms for night nurses and other employes. Owing to the condition of the patients who are to occupy the building, special attention has been paid to securing very free ventilation. Patients will not be obliged to ascend stairways to reach sleeping apartments, and special facilities are provided for bathing and night service. Work will be begun on this building as soon as the weather will permit in the spring.

—The Association of Asylum Assistant Physicians met at Kalamazoo on October 24th. A report of its transactions appears elsewhere in this JOURNAL.

NEW HAMPSHIRE.—*New Hampshire Asylum, Concord*.—An attempt was made to induce the Legislature to make an appropriation for an additional group of buildings intended wholly for the use of the chronic and incurable classes. Unfortunately the bill did not pass, although the number of patients was never larger than at present. The institution, with the new building recently erected, has accommodations for 350, and as there have been 419 in the hospital at one time, the hospital is suffering somewhat from overcrowding.

During the past fall the new house for convalescents, known as the "Twitchell House," was opened and occupied by nineteen male patients. The building has a capacity for from twenty-five to thirty patients. It is connected with the main building by a subway made of brick and stone. Through this subway pass all the hot water, cold water, and steam for warming the building. The addition proves to be very sunny, and admirably fulfills the intention for which it was constructed. The rear portion is entirely distinct from the anterior part, thereby furnishing additional means for classification among the acute and more appreciative patients. This building is placed in charge of a man and his wife.

The trustees at their recent annual meeting decided to erect a farm cottage on the summer estate at Lake Penacook, four miles distant from the asylum. This building will be occupied by a family of working men. The Walker summer cottage has been opened as usual the past year with great benefit to many patients.

NEW YORK.—*Binghamton State Hospital*.—Dr. Arthur M. Collier, who had acted as second assistant physician in this hospital, resigned and has accepted a position as first assistant physician in the St. Lawrence State Hospital. Dr. Warren L. Babcock, who had served as a medical interne, also resigned and accepted a position as an assistant physician on the staff of the St. Lawrence State Hospital. To fill the vacancy caused by Dr. Collier's resignation, Drs. Wm. A. White, L. W. Dodson, Arthur P. Summers, and Robert G. Wal-

lace have been promoted one grade. Dr. Arthur P. Shellman, who had served two years on the house staff of Charity Hospital, New York City, has been appointed a medical interne.

The training school for nurses is again open and much hard work in this line is being done by the physicians and attendants.

The work of converting the lower ward of the north wing of the main building into a dining room is about completed. The room is bright, handsomely finished in quartered oak, and a plain but very neat steel ceiling. The greenhouse has been completed and the old one has been moved to a point near the bakery building. The new mortuary is also nearly finished, as are also the alterations to the north and east buildings. The plans and specifications for the recreation building, and also for the plumbing work in the main building, have been prepared and bids for doing the work have been asked for. The apartments in the bakery building have been substantially furnished and are now occupied, thus lessening the crowded condition of the wards.

A large number of trees and shrubs have been planted and the grounds beautified by grading and the making of lawns. The ball ground has been graded and seeded and is now the pride of all the hospital. The driveways have been worked and many of them macadamized. A new walk has been made from the main building to the south and west buildings, and a high picket fence has been erected along the entire southern side of the hospital premises.

— *Buffalo State Hospital.*— The past year has witnessed the completion of the Buffalo State Hospital in accordance with the original plans made over twenty years ago. Within the year four new buildings, comprising eight new wards, have been completed and occupied by patients, making the capacity of the institution now 1,000.

The new wards are provided with more dormitory space, proportionately, than the older wards; are provided with sunny piazzas and spray baths, and are convenient of management and administration, and also accommodate a large number of patients. The forced blast system of heating is in operation and its workings have been examined by many visitors from this and other States interested in the heating of large buildings.

Dr. Herman G. Matzinger, for eight years a member of the staff, has resigned his position and has entered upon the regular practice of his profession in the city of Buffalo.

Dr. Walter H. Kidder, for two years medical interne, resigned in September, 1895, to accept a position on the staff of the St. Lawrence State Hospital. His place has been filled by Dr. Eugene H. Goodfellow of Gloversville, N. Y.

The position of second assistant physician, made vacant by the resignation of Dr. Matzinger, has been filled by Dr. George G. Armstrong, formerly third assistant physician in this hospital. Dr. Walter H. Conley, formerly fourth assistant physician, was appointed to the position of third assistant.

Dr. Joseph B. Betts of Cropseyville, N. Y., has also been added to the corps of assistant physicians.

— *Willard State Hospital.*— An additional assistant physician has been appointed, and the first assistant, being relieved of the detailed charge of

certain wards, the care of which has heretofore occupied practically all of his time, is assigned the duty of exercising a general supervision over the entire medical service. This change in the plan of administration is expected to prove beneficial by securing uniformity of method in the management of the widely separated departments of the hospital, and we hope that it will at the same time create a greater interest in the strictly medical work.

The rebuilding of the departments destroyed by fire last spring has occupied the summer and autumn, to the practical exclusion of all other important structural undertakings. Eight hundred feet of heavy cast-iron suction pipe was, however, laid in the lake to replace a steel riveted pipe put in three years ago, which proved too light to withstand the waves and strong currents encountered during the winter.

Following the lead of Dr. Bruce in the Royal Edinburgh Asylum, and Dr. Clarke of Kingston, we have been testing the efficacy of thyroid feeding in a number of cases of insanity. The results obtained so far have not been very marked, but there has not been a sufficient trial of the treatment to warrant any definite conclusions. A full report may appear later in the *State Hospital Bulletin*.

— *St. Lawrence State Hospital*.—The recreation building has been started and is nearly inclosed. The employes' building has been completed and is now being occupied. This building accommodates 134 attendants in an admirable manner. With the occupancy of this building there will be no attendant or employe sleeping on the wards. The fire department building is inclosed and will soon be completed. Accommodations are therein provided for all the fire apparatus, stabling for two horses, and living room for two men. In case of fire the hose can be taken to the fire, where hosemen can report, thus saving several minutes in time. The trolley electric road to the hospital is now in operation. This road is fenced in upon the hospital grounds, and the only exit is through a "station," where supervision of visitors can be had.

NORTH CAROLINA.—*The Eastern Hospital, Goldsboro*.—A building designed as an addition to the Eastern Hospital is nearing completion. It is four stories high, 107 x 48 x 47, contains a large dining room and accommodations for ninety-two patients.

An eight-inch well, 570 feet deep, for drinking and other purposes, has recently been bored.

OHIO.—Dr. A. B. Richardson writes there is nothing of much consequence to record in Ohio. The numbers of the insane are increasing in all the institutions in this part of the country, forcing the State to provide accommodations for about 6,000. The institution at Cleveland is particularly crowded, having 129 beyond its capacity, and returning to the county infirmaries or declining during the past year at least 175. An appropriation of \$300,000 is asked of the Legislature to complete the Massillon State Hospital to an extent sufficient to accommodate 500 patients. With this amount it can be prepared for occupancy in the year 1897. There have been no changes of consequence in the official staff of any of the State institutions during the past six months.

—*Athens State Hospital*.—Two new plants, one for ice and the other for electric lights, have been added to this institution during the past few months.

PENNSYLVANIA.—A charter has been granted for the "Pennsylvania Colony Farm for Epileptics." Dr. Wharton Sinkler is president of the Board of Directors, Dr. C. K. Mills and Dr. James C. Wilson are among the directors. Fifty thousand dollars has been offered by a charitable gentleman, provided a farm is secured before January 1, 1896.

—*State Hospital for the Insane, Warren*.—A new building, designed as a gymnasium, and containing Turkish baths for women, has recently been opened in this asylum. It has rooms also where massage is given, and another apartment where molding or modeling in clay will be taught. In the second story is a large room, to be used as a reading-room and museum, and almost a sun-room, as it contains windows on all sides. A porch extends across the building.

Dr. Curwen writes that he is trying to individualize the treatment to a greater extent than heretofore, and finds his new method very beneficial to the patients.

TEXAS.—*Southwestern Insane Asylum, San Antonio*.—Dr. T. T. Jackson has been appointed assistant superintendent of this asylum, *vice* Dr. T. C. Karnes, who resigned on account of physical disability, caused by a gunshot wound received while hunting.

VIRGINIA.—*Western State Hospital, Staunton*.—A new laundry, equipped with all modern machinery, has recently been completed at a cost of \$10,000. Its capacity is sufficient for a population of 1,500 persons. It is contained in a handsome structure, has a granolithic floor, large and modern drying room, is well ventilated, and considered to be the best laundry in the State.

It is contemplated in the near future to tear down the old laundry building and carpenter shop and to erect a large associated dining room, and then to convert the present ward dining rooms into wards, which will add several hundred or more to the present capacity (857 beds) of the hospital.

—*Southwestern State Hospital, Marion*.—An addition to this hospital is about completed, which is three stories high with basement, and is attached to the west wing. The building is 54 x 134, each floor containing seventeen single rooms, three large ward rooms, with twelve-foot hall and a large dining room, and is connected with annex, 16 x 20, containing bathroom and water closet. Metal ceilings are used throughout the building and cement plaster covers the walls. There are solid brick walls between all rooms. An underground corridor, sixty feet long, connects this addition with the main building. Capacity about 120; cost of construction, exclusive of patient labor, \$12,500.

When furnished next summer, this addition will relieve the overcrowded wards and accommodate a portion of the unprovided for (113).

WASHINGTON.—*Western Washington Hospital for the Insane, Fort Steilacoom*.—Dr. Waughop writes: "Since our last report we have adopted uniforms for both officers and attendants and are pleased with the change.

"We are laying the foundation for future scientific work. We have a good many pathological specimens in our incipient laboratory. Post mortems are held, and have been all along, as frequently as possible, and a better autopsy room has been fitted up. Post mortem records are kept in each case in a bound volume of autopsy sheets. Twenty-six post mortems were held during the past year. We have purchased an excellent Leitz microscope with quite complete accessories, including an oil immersing lens and a Minot microtome for making sections. We have also purchased a fifty-cell battery—the 'McIntosh Complete Wall Plate with DeWatterville's Combiner in Wall Case,' with rheodal and milliamperemeter.

"We are also considering the advisability of beginning a training school for nurses.

"Our present population is 521—378 males and 143 females. Our usual proportion is three-fourths male and one-fourth female."

WISCONSIN.—The State institutions of Wisconsin have undergone a change in their official staff under the change in political complexion of the State government. We have not heard complaints that the changes made were for the worse, but if in any case good and worthy servants of the State have been displaced for political reasons, the step is to be condemned, whether taken by one or the other political party. Dr. Wm. Lyman is the newly appointed head of the State Hospital at Madison (Mendota), and Dr. W. Gordon at Oshkosh. We hear these officials well-spoken of in impartial quarters as able and of good professional standing.

The building of county asylums under the "Semi-State" care plan goes on apace; many very good and costly are being constructed. If in time proper medical administration is provided for them and their control is made free from what we may call "party and penury" taint, they may do good work. The Milwaukee Sanitarium at Wauwatosa, a suburb of Milwaukee, under the medical charge of Dr. Richard Dewey, is undergoing extension, a new dormitory building for nurses and employes being about ready to occupy.

OBITUARY.

E. EVARISTE DUQUET, M. D.

Dr. Emmanuel Evariste Duquet was born in Ste. Philomene, Chateauguay County, Quebec, April 3, 1855, his father being Francis Duquet, farmer, of that place.

His early education was received at Beauhamois College, where he spent three years under the tuition of the Christian Brothers. At the age of thirteen he was taken from college to assist his father on the farm, but with a natural aptitude for study, whetted by his brief residence at school, his every spare moment was devoted to augmenting his literary knowledge. His parents dying when he was but sixteen years of age, he was thrown on his own resources. Quitting a farming life, for which he had no taste, he went to Montreal, fully determined to carve out for himself a professional career. At the age of twenty he entered on the study of medicine, and received his degree therein from Victoria College, Montreal, in April, 1879. Immediately after graduation he started as a general practitioner at Longue Pointe, one of the suburbs of Montreal, and soon became well and favorably known as an exemplary citizen and capable physician.

In 1885 Dr. Duquet was nominated assistant physician to the St. Jean de Dieu Asylum, better known as the Longue Pointe Asylum, and from that time forward he devoted himself entirely to the study of mental diseases. His opportunity for observation and study was improved to the utmost, and in 1887, upon the death of Dr. Hovard, medical superintendent of the institution, he was appointed by the Provincial Government to the vacancy thus created, a position he efficiently held up to the date of his premature death.

In spite of a naturally delicate constitution, Dr. Duquet never spared himself in his untiring efforts to improve the condition of his unfortunate charges, who, at the time of his demise, numbered no less than 1,300. The severe strain from the increasing mental and physical labor connected with so large an institution gradually undermined his health, and rendered him unable to combat an attack of pneumonia, with which he was seized, and to which he succumbed after an illness of only eight days' duration. The end came on the evening of Wednesday, December 19, 1894, long

before the age which men count fit, he being only in his fortieth year. A two-score years of greater usefulness it would be difficult to find.

The subject of the classification of mental disorders was ever a favorite one with Dr. Duquet, and his remarks thereon in the psychological section of the medical congress, held at Philadelphia in 1887, were most favorably commented upon by all who heard them.

During the summer of 1889 Dr. Duquet made an extended tour in Europe, visiting many of the principal asylums. He also attended the International Congress on Mental Diseases, held at Paris in August of that year, where his observations on "Legislation Concerning Insane Asylums in the Province of Quebec" were listened to with marked attention. These observations, together with an able paper from his facile pen, entitled "Notes sur un Cas de Folie Simalée," were published in the report of proceedings by the general secretary for the congress, Dr. Antonie Ritti. The favorable impression here made upon his European confrères was testified to by his election, in November, 1889, as an associate member of the Medico-Psychological Society of Paris. In 1890 a similar honor was conferred upon him by the "Société de Médecine Mentale" of Belgium.

The following letter in connection with his election to the former society speaks eloquently of the regard Dr. Duquet had won for himself:

PARIS, November 28, 1889.

DEAR SIR AND CONFRÈRE: I have the honor to inform you that the Medico-Psychological Society of Paris, taking into consideration the conclusions of my report on the work of the International Congress on Mental Diseases, unanimously elected you an associate member.

I am delighted at this decision, as it brings to our society a colleague whose work it justly holds in high esteem. I interpret its sentiments in assuring you of our cordial congratulations.

Accept, dear sir, again my hearty good wishes.

THE GENERAL SECRETARY,

ANTONIE RITTI,

State Asylum of Charenton.

Dr. Duquet was a man of fine presence, and of fluent delivery in either French or English. He was a cheerful, generous, warm-hearted friend, possessed of broad sympathies; a well-read physician of wide and varied culture. Though a devout Roman Catholic, he was devoid of any sectarian narrowness, but, instead, full

of a large and charitable spirit to all mankind; firm in his support of what he deemed right, but tolerant of all honest difference of opinion. In short, he belonged to the highest type of asylum superintendent.

Dr. Duquet was married, in 1884, to Rose A., daughter of Mr. Edward Quinn of Longue Pointe, a union which was a source of great happiness to both. Three children were born of the marriage, who, with Mrs. Duquet, survive him.

At the meeting of the Montreal Medico-Chirological Society, held January 25, 1895, Dr. W. H. Hingston, in moving (seconded by Dr. T. J. W. Burgess) that the society record its sense of the great loss it had sustained by the death of Dr. Duquet, added the following justly merited tribute:

"Dr. Duquet's was one of those quiet, reserved, retiring dispositions, which secured for him the respect and esteem of his professional brethren."

His appearance was that of a gentleman; his manner was dignified, and gave one the impression of great reserve power.

The members of the society present at the congress at Philadelphia, in 1887, will remember the favorable impression created in the section on psychological medicine by the calm, clear, judicial manner in which he submitted his views on a new classification of mental diseases. I was present at that meeting, although not in that section, and several of the distinguished alienists informed me of their warm appreciation of the able manner in which he laid down his views, and the clearness and lucidity of his method.

Toward his professional brethren he was delicately honorable, and his death, at so early an age, was a matter of universal regret.

T. J. W. BURGESS.

ITEMS.

THE officers at Fort Sheridan, United States military post, have had an investigation of a scandal, in which "post alcoholic insanity" served as a plea in extenuation of an assault. "Post alcoholism," as one of the counsel termed it, is a plea not creditable to the officer or the army.

THE City Insane Asylum of New York is again opened for clinical teaching. All the medical schools have the privilege of clinical demonstration of cases of insanity.

THE Rush monument fund now amounts to \$3,548.39.

GOVERNOR MORTON is in favor of State care for the city insane. A bill to that effect has been introduced.

SO MUCH trouble has arisen over the Hannigan, Aub, and other cases in New York that an effort is being made to change the method of gaining expert testimony.

BY a decision of the Court of Appeals, New York must pay into the State treasury \$1,500,000, the balance of the tax, with two years' interest, for State care of insane.

THE able and esteemed *Medical News* has been moved from Philadelphia to New York, and Dr. J. Riddle Goffe has become its editor.

THE Medical Society of Berne has inaugurated a plan for the suppression of press notices of suicides.

PROGRESS and professional ability in the neurological specialty are shown by the Kansas City profession, as illustrated by bringing Dr. Sachs from New York to read a paper before the Academy of Medicine, as well as by Dr. Sachs' expression of praise of the high level of professional attainment shown by the profession of Kansas City.

We are indebted for our knowledge of the above to *Langsdale's Lancet*, a new and very creditable adventure in medical journalism, in which Dr. John Punton, professor of diseases of the mind and nervous system in the Universal Medical College of Kansas City, conducts a department of neurology and psychiatry, which promises to be interesting and profitable to the readers of the *Lancet*.

DR. WM. F. DREWRY of the Central State Hospital, Petersburg, Va., read, at the last meeting of the State Medical Society, a paper on "State Provision for Epileptics." After the reading of the paper the State Society passed a resolution urging provision for epileptics by the State, and appointed a committee, consisting of Dr. R. J. Preston (president) and Dr. Drewry, to present the matter to the State Legislature.

THE authorities of the Craig Colony for Epileptics give notice to the superintendents of the poor of New York that they will soon be ready for a limited number of patients.

EVEN in Boston there is the usual difference between State and municipal care of the insane. The city has allowed \$2.75 per week, the State \$3.55, but as the city authorities anticipate the State will soon take over the burden, they have allowed \$3.55 for three months.

DR. J. M. MOSHER and Dr. Robert Cook of the St. Lawrence State Hospital, previous to their recent departure for Europe, were given a complimentary dinner by the Ogdensburg Medical Society. This journal, which has had their valuable services, tenders them congratulations and best wishes. They are sure to be greatly missed at the State Hospital, but will no doubt render services to the profession increased in value by their foreign sojourn.

ACCORDING to the *Journal of the American Medical Association*, Dr. J. H. Letcher of Henderson, a prominent Republican, is mentioned as the choice of Governor Bradley for superintendent of the Hopkinsville Asylum, and Dr. I. N. Baughman of Flat Lick for superintendent of the Eastern Asylum at Lexington. Dr. Baughman has held public office before, having been pension examiner under the last Republican President.

THE Iowa hospitals for the insane at Clarinda and Independence each publish a neat monthly paper. That of the Clarinda institution, *The Hospital News*, is before us; its title indicates its scope. It seems to be a very creditable issue.

THE INFLUENCE OF MIND.—Great brain and nerve strain, as in insanity, brittles the bones; grief and fright blanches the face and hair; fear paralyzes the heart, depresses temperature, causes excessive and clammy perspiration; anxiety arrests secretion and shrivels the skin; remorse wastes away the body; anger flushes the face and so fills the brain with blood that its vessels burst and the victims fall with apoplexy; shame flushes the cheek, slows the heart and respiration; sorrow shows itself in tears; love and good fortune brighten the countenance and quicken the step and pulse and lift up the form; while adversity and remorse sadden the face, slow the pulse, bend the form, and depress the bodily movements. These things, and many needless to mention, show us the potency of mental influence, through its proper neural channels, on the movements of the organism. We can not deny them in regard to the stomach. On the contrary, as we see the systole of the heart arrested by emotion, so we see digestion stayed by disagreeable and depressing thought. Mental force, through psychoneural media, pervades the body, and the stomach is not exempt from its invigorating or depressing influence over its physiologic functions.—*Dr. C. H. Hughes.*

IT seems, from a complaint in the *Medical Press*, that the lunatic wards in English poor law institutions are sometimes made places for disciplining the sane inmates, disobedience or disorder being punished by a transfer to among the lunatics. The *Medical Press* asks the local government boards to investigate this alleged abuse.

DRS. VICTOR HORSLEY AND BEEVOR have reported two cases of relief of athetosis by trephining and excision of cortex. But in both the patient died from brain complication within a year or two.

ACCORDING to the *Kansas Medical Journal* it is possible in that State to try an individual for insanity by jury trial, in his absence and without his knowledge, and it calls attention to this weak point in their insanity laws. This would seem to be the *reductio ad absurdum* of the jury trial for insanity.

APPOINTMENTS, RESIGNATIONS, ETC.

- APPLEGATE, DR. CHARLES F., promoted from Third to First Assistant Physician at the Iowa Hospital for the Insane, Clarinda.
- BABCOCK, DR. W. L., appointed Assistant Physician at the St. Lawrence State Hospital, Ogdensburg, N. Y.
- BARRETT, DR. ALBERT M., appointed Third Assistant Physician at the Iowa Hospital for Insane, Independence.
- BETTS, DR. JOSEPH B., appointed Assistant Physician at the Buffalo State Hospital, Buffalo, N. Y.
- BOODY, DR. GEORGE, resigned as Assistant Physician from the Illinois Eastern Hospital at Kankakee.
- BOODY, DR. GEORGE, appointed Second Assistant Physician at the Iowa Hospital for the Insane, Independence.
- BURNET, DR. ANNE, appointed Second Assistant Physician at the Iowa Hospital for Insane, Clarinda.
- COLLIER, DR. A. M., resigned as Second Assistant Physician at the Binghamton State Hospital, Binghamton, N. Y.
- COLLIER, DR. A. M., appointed First Assistant Physician at the St. Lawrence State Hospital, Ogdensburg, N. Y.
- DOOLITTLE, DR. JOHN C., promoted to First Assistant at the Iowa Hospital for the Insane, Independence.
- DREW, DR. C. A., resigned as First Assistant Physician at the Iowa Hospital for the Insane, Clarinda.
- GOODFELLOW, DR. EUGENE H., appointed Interne at the Buffalo State Hospital, Buffalo, N. Y.
- GUNDRY, DR. A. T., appointed Third Assistant Physician at the Iowa Hospital for Insane, Clarinda.
- INCH, DR. GEORGE F., appointed Interne at the Michigan Asylum for the Insane, Kalamazoo.
- JACKSON, DR. T. T., appointed Assistant Superintendent at the Southwestern Insane Hospital, San Antonio, Texas.
- KARNES, DR. T. C., resigned as Assistant Superintendent at the Southwestern Insane Asylum, San Antonio, Texas.
- KELLOGG, DR. T. H., resigned as Superintendent at the Willard State Hospital, Willard, N. Y.
- KIDDER, DR. WALTER H., appointed Assistant Physician at the St. Lawrence State Hospital, Ogdensburg, N. Y.
- MABON, DR. W., appointed Superintendent at the Willard State Hospital, Willard, N. Y.
- MACKIN, DR. M. C., appointed Fourth Assistant Physician at the Iowa Hospital for Insane, Independence.
- MARKHAM, DR. H. E., resigned as Second Assistant Physician at the Iowa Hospital for Insane, Clarinda.
- MATZINGER, DR. H. G., resigned as Assistant Physician at the Buffalo State Hospital, Buffalo, N. Y.
- MATZINGER, DR. H. G., appointed on staff at the St. Lawrence State Hospital, Ogdensburg, N. Y.
- MEYER, DR. ADOLF, resigned as Pathologist at the Illinois Eastern Hospital for Insane, Kankakee.
- MEYER, DR. ADOLF, appointed Pathologist at the Worcester Hospital for Insane, Worcester, Mass.
- ROBERTSON, DR. E. H., appointed Interne at the Michigan Asylum for the Insane, Kalamazoo.
- VOLDENG, DR. M. NELSON, resigned as First Assistant Physician at the Iowa Hospital for the Insane, Independence.
- WELLS, DR. J. W., resigned as Third Assistant Physician at the Iowa Hospital for the Insane, Independence.
- WORCESTER, DR. W. L., appointed Pathologist at Danvers State Hospital, Danvers, Mass.

BOOKS, ETC., RECEIVED.

Clinical Lectures on Diseases of the Nervous System. Delivered at the National Hospital for the Paralyzed and Epileptics, London. By W. R. GOWERS, M. D., F. R. S. Philadelphia: P. Blakeston, Son & Co., 1895.

A History of the Chronic Degenerative Diseases of the Central Nervous System. By THOMAS KIRKPATRICK MONRO, M. A., M. D. Glasgow: Alex Macdougall, 1895.

Pregnancy, Labor, and the Puerperal State. By EGBERT H. GRANDIN, M. D., Consulting Obstetric Surgeon to the New York Maternity Hospital, etc., and GEORGE W. JARMAN, M. D., Obstetric Surgeon to the New York Maternity Hospital, Gynecologist to the Cancer Hospital. Philadelphia: F. A. Davis & Co., 1895.

De una Nuova Forma di Nevrastenia Parziale (Anagnosiastenia). Pel PROF. L. BIANCHI. Estratta degli Annali di Nevrologia, XIII, p. 1. Naples, 1895.

PROF. LEONARDO DR. BIANCHI. Validita Contestata del Testamenti di un Suicida. Perizia psichiatria. Estratta del Giornale di "Medicina Legale," II, F. 4. Lanciano, 1895.

Kriminalanthropologie. Von DR. G. BUSCHAN in Stettin. Sep. Abdr. aus der Real.-Encyclopedia des gesammten Heilkunde. Bd. V, 1895.

Bibliographischer Semesterbericht der Erscheinungen aus dem Gebiete Neurologie und Psychiatrie. Von Dr. Med. u. phil., G. BUSCHAN. Erste Jahrgang, 1895, erste Hälfte, Jena, 1895. Gustav Fischer.

Max Nordau and His Critics. By G. FRANK LYDSTON, M. D. (Rep. from *Medicine*, September, 1895.)

A Case of Moral Insanity. By ELIOT GORTON, M. D. (Rep. from *JOURNAL*.)

Hypnotism, with Special Reference to Hypnotic Suggestion as an Aid to the Anesthesia of Chloroform and Ether. By CHARLES GILBERT DAVIS, M. D. (Rep. from *Jour. of the Amer. Med. Ass'n*, October 5, 1895.)

A Well-marked Case of Kahlbaum's So-called Katatonia. By L. W. DOLAN, M. D. (Rep. from *Med. Record*, July 6, 1895.)

Twelfth Annual Report of the Committee on Lunacy, to the Board of Public Charities of the Commonwealth of Pennsylvania, for the year ending September 30, 1894.

Intestinal Obstruction following Operations in which the Peritoneal Cavity is Opened. The president's address before the American Association of Obstetricians and Gynecologists, at Toronto, September 20, 1894. By GEO. H. ROHE, M. D. (Rep. from *Transactions*.)

Pelvic Disease in Women and Insanity. Read at the fifty-first meeting of the American Medico-Psychological Association at Denver, Colo., June 13, 1895. (Rep. from *Journal of the Am. Med. Ass'n*, October 12, 1895.)



PROCTOR HOUSE.

MEN'S BELKNAP.

ADMINISTRATION.

WOMEN'S BELKNAP.

APPLETON HOUSE.

MCLEAN HOSPITAL.



INDEX. A, Administration House. B, Upham. C, Men's Belknap. D, Proctor. E, Bowditch. F, Men's Gymnasium. G, Women's Belknap. H, Appleton. I, East J. Wyman. K, Women's Gymnasium. L, Service Building — Entertainment Hall, Kitchen, etc. M, Medical Superintendent. N, Heat, Light and Power. O, Stable. P, Gate Lodges. R, Greenhouses. S, Private Cottage. T, Laundry.

AMERICAN JOURNAL OF INSANITY.

APRIL, 1896.

THE NEW McLEAN HOSPITAL.

BY HENRY M. HURD, M. D.,
Baltimore, Md.

It has been the custom of the JOURNAL OF INSANITY during more than half a century to publish full details of new institutions erected for the better care and treatment of the insane; hence the recent opening of the new McLean Hospital at Waverley, near Boston, calls for more than a passing notice.

The old McLean Hospital at Somerville, opened in 1818, in its history of upward of three-quarters of a century, achieved exceptional success, not only in the treatment of patients but in developing strong men to guide its affairs and to contribute notably to the advancement of psychiatry in America. The list of names — Wyman, Lee, Bell, Booth, Tyler, Jelly, Cowles, and others — is a most honorable one, and their work will live, even if the scene of their fruitful labors is swallowed up by the growth of a large city. For the past twenty years it had been apparent to the trustees of the McLean Hospital that the encroachment of extensive lines of railway rendered its historic site undesirable for the most satisfactory treatment of patients; this led, long ago, to the decision to transfer the whole establishment to a site in the country beyond the possibility of future similar encroachments. Although such removal had been deferred, by reason of financial obstacles, for a much longer time than they deemed wise, the perfection of the present buildings and site is undoubtedly due to the deliberation with which the step was taken, and the thorough consideration of the plans which years of preparation gave. The wisdom of the present location is apparent to all who have visited the charming site and have feasted their eyes upon the surrounding scenery. The plans of the buildings and their arrangement with reference to each other, in fact the whole development of the new hospital, have been the work of the accomplished superintendent, Dr. Edward Cowles, the late honored

president of the American Medico-Psychological Association. His loving enthusiasm in the treatment of insanity, and his strong convictions of the requirements for successful treatment of patients of a comparatively well-to-do class, have borne fruit in this admirably arranged institution, which marks a distinct advance in the treatment of curable insanity in America. The ground plans of the buildings grew out of daily experience in the difficulties of treating patients of a middle class, accustomed to luxuries and comforts at home, to whom seclusion, pleasant, tasteful, and refining surroundings, and a semi-domestic in contrast to an institutional life, and proper occupation were essentials to cure. In the new McLean Hospital the buildings have been so arranged as to prevent the occupants of one from coming in contact with those of another, if there seemed any possibility of injurious, depressing, or painful association from such contact. Beyond this the interior arrangements of individual buildings furnish complete seclusion to excited patients, so that it is possible for them to go through an attack of insanity without seeing any other patient. The buildings resemble gentlemen's country residences in a natural park rather than the structures of a large institution. Although thus separated, through an ingenious arrangement of connecting corridors they are in constant touch with the administration building and are easily supervised from a common center without any sacrifice of privacy or loss of their distinctive characteristics. Thanks to the telephone, it is no longer necessary that all the wards of a hospital should be within the same four walls.

The cardinal points in the erection of the new McLean Hospital may be stated in brief to have been:

1. To furnish comfortable, tasteful, elegant, and homelike uninstitutional surroundings to patients of every class.
2. To give seclusion and necessary privacy to all patients requiring them; and to avoid the possibility of injurious, depressing, or distasteful association with other patients.
3. To give to each patient an environment best adapted to promote a rapid recovery.
4. To promote cures by healthful, natural modes of occupation, and by physical culture in well-arranged gymnasiums under competent and painstaking medical direction.
5. To study each case of mental disease thoroughly and exhaustively, both clinically and by laboratory methods, in order to attain more perfect methods for the curative treatment of insanity.



PROCTOR HOUSE.

MEN'S BELKNAP.

ADMINISTRATION.

WOMEN'S BELKNAP.

APPLETON HOUSE.

WEST VIEW AND ADMINISTRATION.

6. To study diseased mental manifestations by laboratory methods in order to advance psychiatry, to increase a scientific knowledge of mental diseases and to promote the efficiency and special education of members of the medical staff of the hospital.

7. To educate nurses for the insane by giving them a recognized position and every facility to acquire a special and technical training.

How well all these objects have been considered the annexed description of the constituent buildings of the new hospital will abundantly testify. The buildings are pleasing to the eye and the architectural details have been very thoroughly and successfully wrought out.

DESCRIPTION.

The grounds of the hospital are in the town of Belmont, at the village of Waverley, about six miles from Boston, and have an area of 176 acres. They present an uneven surface, the central parts rising 150 to 200 feet higher than at the entrance, with abrupt slopes near the boundaries to the east, south, and west. To the east there are wide views of Boston, the harbor, and neighboring cities; and to the south and west one looks over the village and the famous Waverley oaks, said to be four centuries old, into the valley of the Charles River, and sees the suburban regions of Brighton, Brookline, Watertown, Newton, and Waltham, with beautiful distant views beyond, including the blue hills of Milton in the south. The ground rises in irregular terraces, the middle one of which has been chosen as the site of the main group of buildings, the principal ones facing the southwest. The higher ground behind them is covered with a forest growth which affords protection from the northerly and easterly winds, and one-half of the estate is heavily timbered woodland, especially on the side toward the east and south.

The irregularity of the surface has aided to give each building an individual and domestic character unlike those of an institution. The effect is increased by varying the styles of architecture and the materials of which they are constructed, and by placing them at distances apart of 125 to 250 feet. This arrangement affords an effective separation of each household from its neighbors.

The main group consists of seven houses for patients, connected as to their basements by a low covered way so arranged as to appear from outside like an ordinary garden wall about five feet high. In addition to these is the central or administration house, with others annexed for the laboratory, entertainment hall, kitchen,

laundry, workshops, and boiler house, extending a considerable distance in the rear; there are also gymnasiums for men and women.

Detached from the main group by a distance of about seven hundred feet is the Upham House, affording for men an accommodation similar to that given women by the Appleton House.

Its distance from the main group and the absence of any connecting corridor leads to an administration which will be largely independent.

The interior construction of all the buildings is alike in many particulars that may be included in a general description. The main corridors and hallways are inclosed by brick walls, with floors of brick laid on arches of terra cotta tiles. The partitions between rooms, where not of brick, are of terra cotta blocks. All furring is of porous terra cotta, forming an air space within the wall, no wooden lathing or furring being used. All floors are deadened with plastering between the upper and under flooring. This construction tends to make the rooms sound-proof and fire-proof. Standpipes connected with the water tower are carried through each building to the roof, with outlets and hose on each floor. These corridors are not used as parlors, with patients' rooms on either side, as in common hospital fashion, but serve only as passages to parlors of good size, which are sunny corner rooms in almost all cases. The corridors are also carefully provided with light by alcoves and in the open spaces for stairways, which have easy flights, broad landings, and ornamental spindle work. It is everywhere sought to obtain a domestic style of construction and homelike effects.

The rooms are generally arranged with communicating doors so that they can be used singly or in suites of two or more. Those in the buildings for the more quiet classes of patients nearly all have fireplaces, which are provided liberally in the sitting rooms of all the houses. There is an ample closet for nearly every room, and the larger closets, store rooms, linen rooms, bath and toilet rooms are well lighted by windows in the outer walls.

The windows generally have large panes of glass in the lower sashes; in the women's department there are generally no guards for these windows, except the screens of wire gauze in common use. Some of the larger windows, of parlors, etc., have ornamental iron balconies; awnings will be used in summer in these places, and common folding blinds elsewhere. In the men's department the windows are treated somewhat differently, to give security

in places where it is needed. Electric lighting is used in all the buildings.

The system of heating and ventilation is designed to be free from all avoidable complication, and suited to the requirements of domestic life; each house is treated independently of all others, except that all in the main connected group are supplied with steam from a central boiler house. It is conducted in large mains through the basement corridors already described, with branches to the several buildings. This steam-heating is by indirect radiation, and the distribution is effected by placing in the basement underneath nearly every room, an independent heating stack, covered with metal, to which cold air is brought by ducts through openings in the outer walls. In each room the general arrangement is to place the hot-air register near the floor by the fireplace, the hot-air ducts rising in the chimney stack. The size of these ducts are arranged upon the basis of an allowance of about 100 square inches of clear area for the inlet of warm air to a room of the average size of 11 x 14 feet, with about 150 square feet of floor space, and a cubic space of 1,500 feet. The inlet opening, two-thirds of a square foot in area, will admit 4,800 cubic feet of air in an hour, at an entering velocity of two feet per second. The air of the room can thus be changed completely about three times each hour. Ventilation is effected by as simple means as possible, with reliance upon natural forces and the tendency of warm air to rise, in ducts kept properly warm by being placed in the inner walls. For each room there is an outlet opening near the ceiling, and another near the floor, leading into the same ventilating duct. These outlets correspond in size to the inlets, and the exit ducts lead directly upward to a chamber placed in the highest part of the roof. In the principal buildings there are two to four of these chambers permitting the ducts to enter them by short, lateral distances. The sides and floors of the chambers are covered with metal, and heat from steam-pipes, when required, will accelerate the outflow of air through louvered openings or copper ventilators. The dampers of the fireplaces are kept closed when there is no fire in them. No attempt is made to ventilate any room by a comparatively small outlet duct leading upward directly to the outer air; this would act at times, particularly in cold weather, like an unused chimney flue, and permit the downward flow of cold air. The simple principle of the system adopted, by which a constant outflow is determined, is to place an intervening body of warm air, at a high level, between the

rooms to be ventilated and the outer air. This provision, if adequate in size, should always prevent the reversal of currents in ventilation. In the rooms to be ventilated, the more or less rapid outflow of air is determined by simply opening or closing the upper register. The lower opening is always open and the ventilation, though less active, goes on constantly by being let alone.

The attic rooms are heated by the transom system. A large supply of warm air is delivered in the upper halls and corridors, which, entering the rooms through open transoms over the doors, warms the rooms, the circulation being accelerated by the chilling and downward flow of the air at the windows. The ventilation is by outlets near the floor in all cases, since if there were open outlets near the ceiling, on a level with the transom inlets, the warm air would tend to pass immediately out without warming the room.

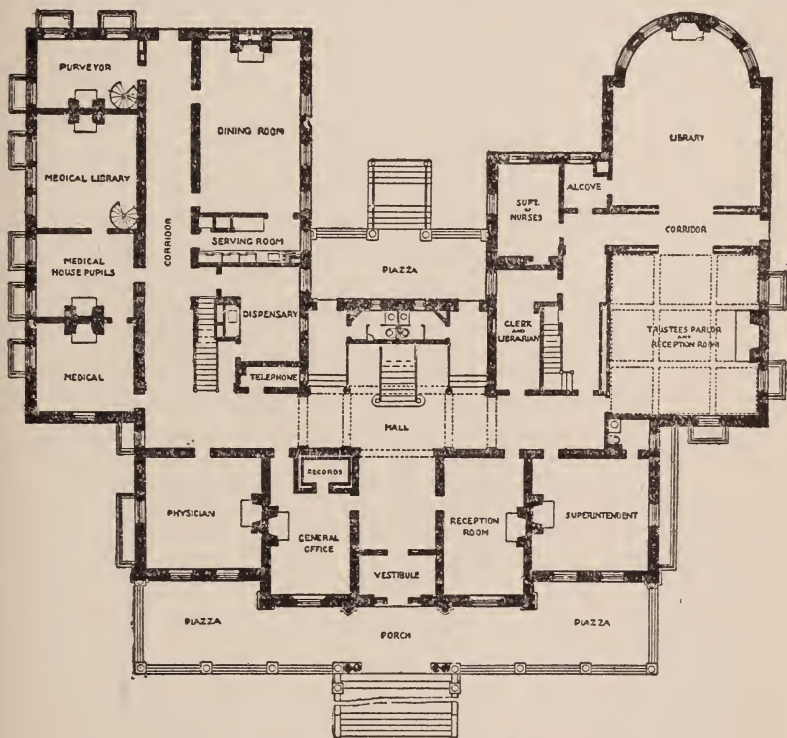
Lavatories, bath and toilet rooms, have, in each set of these apartments, a ventilating shaft 2 by 2½ feet in the clear, built of terra cotta blocks, extending upward directly to the outer air without communication with the ventways of any living rooms. These shafts are incidentally warmed by the waste heat from the risers of the steam pipes as they pass to the vent-chambers before described; the waste heat from the risers of the hot-water pipes that serve the lavatories, etc., is also utilized. These rooms are all practically well isolated, with their independent heating and ventilation. They are of simple construction, all plumbing fixtures being exposed, with marble or tiled floors under them. The vent-shaft serves also as a pipe-shaft, around which the fixtures are closely placed; into and out of it all water, waste, and vent pipes directly pass above the floor level of any given room. Thus there are no traps or pipe-joints to leak in the spaces between the floors and the ceilings below. There are openings on each floor, covered by panels to afford access to the pipe shafts, in which ladder rungs are fixed to easily repair pipes and traps.

ADMINISTRATION HOUSE.

This building stands as the center of the main group, and has the appearance of a large private residence, with broad terraces in front and rear, and an enriched central entrance and porch. The exterior is old colonial in style, and the materials are light yellow brick and white marble, with copper cornices, and balustrades painted white, and a copper roof. There is a main building, rectangular in shape, of three stories and an attic, and a wing of two

stories and an attic, at either end, running back at right angles with the main axis. The total area covered by the building is 9,728 square feet, exclusive of piazzas.

The entrance leads through a wide vestibule to a spacious hall, and opposite is the main stairway, with a broad landing halfway up, a large eastern window over it, and exits under it to the terrace and garden in the rear. The main corridor on the left leads to the offices and telephone room and to the dispensary, a roomy medical



ADMINISTRATION HOUSE.

library and dining room in the west wing; on the right, to the reception rooms and other offices, and to a large parlor and general library and reading room, for patients in the east wing. The last two rooms, by opening double doors, can be thrown together for assemblies of patients, etc., on special occasions. The second and third floors are entirely occupied as the residence of the medical staff and household officials and the servants of the house. There is a general parlor and a liberal allowance of space for the private

rooms, closets, etc., while care has been taken to gain the effect of a homelike appearance and the comfort of a dwelling house.

At the rear end of the west wing a corridor leads back to the laboratory and service building, which contains the entertainment hall, kitchen, etc., and is also the residence of the employes. From the west side of this building the corridor leads westward to the house occupied by men patients. In the basement of the west wing of the Administration House is the storekeeper's office and store rooms and the officers' kitchen. Under the east wing is the dining room for women nurses, and here, also, begins the corridor that leads to the houses occupied by women.

THE UPHAM MEMORIAL HOUSE.

The benefactors' names (Appleton, Belknap, and Bowditch) were given to buildings at Somerville which became historic in connection with the old hospital. The Upham Memorial House was the generous gift to the new hospital of Mr. George B. Upham of Boston as a memorial to his son. It is detached from the main group by about 700 feet; it covers an area of 7,500 square feet and has a basement, two stories and attic. The exterior walls are of pressed brick, with white Georgia marble trimmings, and the underpinning of hammered granite. The roof is covered with dark slate. The front entrance is covered by a *porte-cochère* of white marble and there is a covered porch of the same material at the southeastern end. The style of the building is colonial. It is the counterpart of the Appleton House for Women, and affords like accommodations for men. It stands to the westward of the Administration House, and its main entrance, facing the latter, leads from the covered porch to a spacious hall, which has a memorial character in its design. On the right of the entrance is a reception room, and a passage leads to the dining room at the northwestern end of the building. At the left of the entrance hall is a broad stairway leading to a capacious hall above, and beyond the stairs the hall opens into another, whence a short corridor and vestibule leads to the covered porch and terrace on the southeast front. At each of the two corners of this front is a suite of rooms, including a parlor, chamber, and private toilet room, etc. There are nine such suites of rooms in the building, four on the first and five on the second floor. The house is divided by a thick longitudinal wall extending through both stories, thus affording seclusion to one-half of the house from the other half when desired. In the southwest half of the house the



UPHAM HOUSE.

front hall, already described, is connected by a passage with a rear hall, and between them is a second broad stairway, and a well which gives an abundance of light to the interior. These intervening arrangements also aid in the seclusion of rooms when desired. There are two suites on the westerly side of the house which have



an outlook towards the valley of the Charles. A short corridor leads from the rear hall past the serving room and adjoining the dining room, to an exit upon a terrace at the northwest corner of the house, and to the grounds in the rear.

The second floor, with its five suites, corresponding closely with those on the first floor, has also a billiard and smoking room over

the dining room. All the rooms have fireplaces, ample closet room, etc., and a lobby intervening between them and the adjoining hall, so that the patient may have extreme quietude and seclusion from others when desired, or a disturbed patient may not annoy others.

The attic contains rooms for nurses, including a sitting room, chamber, and bath for the supervisor and his wife, who have charge of the building, and who are trained nurses. There are also rooms for a cook and housemaid. Other rooms afford accommodations for twelve men nurses. Two private stairways lead from the attic to the stories below, one passing directly to the basement.

The basement contains a large kitchen, pantry, refrigerator, and store room. There are also a dining room for nurses and a sitting room with outlook toward the west, the basement being above ground-level on this side. A special arrangement for Turkish and plunge baths, etc., includes three rooms and a dressing room.

The heating is by steam from a furnace in the basement, by indirect radiation, there being a separate stack of pipes in a metal casing for each room or group of rooms. The hot-air register of each room is near the floor, and by the side of the fireplace. The ventilation is by the simple system described elsewhere.

BELKNAP HOUSE FOR MEN.

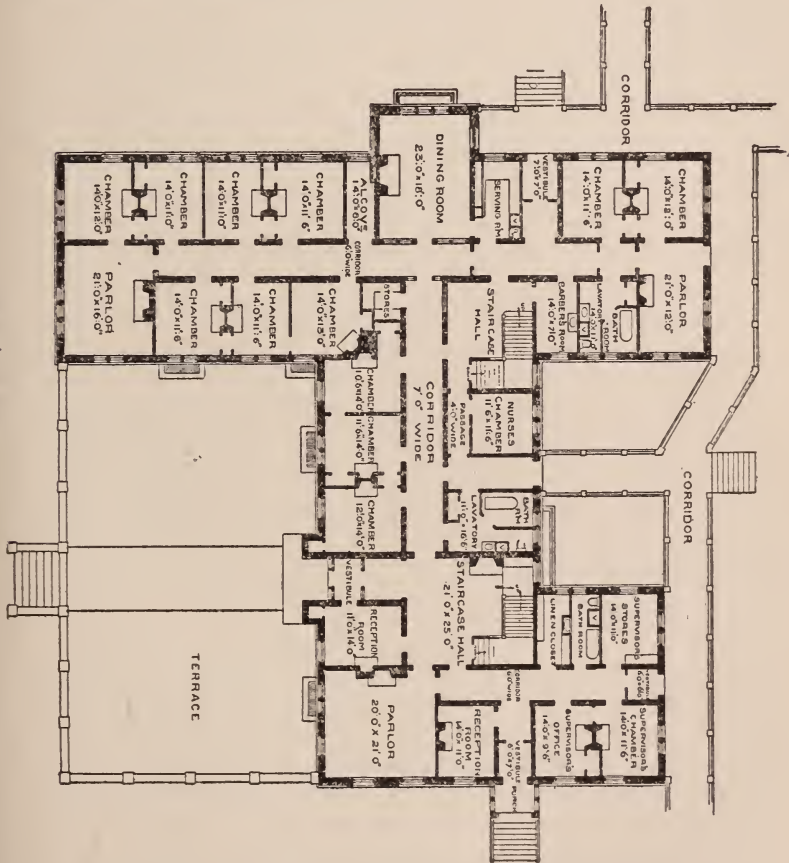
The Belknap House for Men is the first of the group of houses for men, standing next to the Administration House on the north, from which it is distant 165 feet, and fronting in the same direction to the southwest. The covered corridor leads first from the Administration House to the service building and thence to the Belknap House here described. It covers an area of 8,200 square feet and has rooms for twenty-nine patients on its first and second floors, and for twenty nurses on the third floor.

The main part of the house is 121 feet in length, and has a short wing projecting to the rear of each end. At the north end a long arm advances to the front and forms with the main house two sides of a rectangular space, the boundaries of which are completed by a stone balustrade. The inclosure is somewhat higher than the surrounding ground, thus forming a terrace which is reached by a short flight of steps from the driveway in front; a broad walk leads thence to the front entrance, which is a recessed porch.

The exterior of the house is of hard-burned eastern brick, with dark-colored headers laid in Flemish bond. The trimmings are of

buff Amherst stone; the walls are solid and protected from dampness by porous terra cotta furring on the inside. The roof is covered with red slate, and there are brick dormer windows in addition to those in the gables, lighting the third story. A novel feature in the construction of the high pitched roof is the use of louvered openings in its slope, placed just below the ridge to form outlets for four ventilating chambers.

DEKKNAP HOUSE FOR MEN.



The main entrance has a tiled vestibule, and leads first to a reception room and past it to a well-lighted hall, where there is a handsome stairway. The main corridor leads thence each way; at one end it intersects the corridor of the north wings, where there is an entrance to the dining room; behind this there is a small hall and a side entrance to the more secluded sections of the building.

At the south end the cross corridor leads to the office, store rooms, etc., of the supervisor of the department for men; there is also another side entrance here, where patients and visitors may be received. The interior corridors and hall are made light by alcoves suitably placed.

The first floor of the Belknap House contains twelve rooms for patients, sunny parlors pleasantly situated at the corners of the building, and service rooms conveniently arranged for the several sections. The second floor has a like arrangement of rooms and accommodates seventeen patients. The interior corridors are built upon brick arches; and all the toilet, bath, and serving rooms have floors of slate or mosaic laid upon the same construction. The finish of the principal parts of this house is of quartered oak, with wainscoting in the entrance hall; the plastered walls are painted in cheerful colors, and the floors generally are of hard pine. In the basement the main corridor has an asphalt floor, and that in the kitchen is of slate.

At the rear of the building there are three ways of exit to a large garden, which is well shaded by trees. The low corridor bounding the garden on the north leads to the men's gymnasium, and beyond this to the Bowditch House. Intersecting the same corridor as it leaves the Belknap House is another leading farther north to the West House. It will be seen by the plans that these connecting corridors are so arranged that the many people by whom they are used may pass by the several buildings without entering them, or without disturbing their occupants.

PROCTOR HOUSE.

The Proctor House has been given this name in honor of Mr. Thomas E. Proctor of Boston, formerly a trustee of the hospital and interested in the rebuilding of it, and in recognition also of his generous bequest, recently received, for the building of a house for patients. This house stands 160 feet north from the Belknap House for Men, and covers an area of 9,352 square feet. It is connected with the latter by a basement corridor, such as has been described, and fronts in the same direction — to the southwest. It is a building of two stories, with accommodations for thirty patients, fifteen on each floor.

The exterior is of red brick, laid in Flemish bond, with dark bench headers. The underpinning is of granite. The quoins, sills, belt courses, balustrades, etc., are of Indiana limestone. The

of the longer wing, extending backward; the communicating covered way from other buildings is joined to the basement of this wing. The inner angle of this intersection is occupied by the dining room on each floor, octagonal in shape, with broad windows and handsome fireplaces.

In this building the sunny corner parlors and the effects of alcoves for lighting the corridors are obtained with some pleasing variations of construction. Nearly all the rooms occupied by patients have the benefit of the fine outlook to the southwest, into the beautiful suburban region of the Charles River valley. The rooms for special quietude or seclusion are in the north wing, and there is a special exit from them to a piazza leading to the garden. There are also two other rear exits from the different parts of the house in the same direction, enabling the patients to go across the garden to the gymnasium, or by the covered way. The interior corridors, halls, serving, bath, and toilet rooms are of fire-proof construction on tiled arches. In all rooms where water is used the floors are of tiles or mosaic, and the plumbing is exposed. The basement has floors of asphalt in the main passages, of slate in the kitchen, pantry, etc., and of concrete elsewhere. The main floors are of hard pine, and the finishing is chiefly in hard woods, quartered oak, sycamore, etc.

THE BOWDITCH AND WYMAN HOUSES.

The Bowditch House stands in the rear and to the northeast of the men's Belknap, at a distance of 480 feet, the gymnasium for men intervening between the two buildings last mentioned. These buildings are all connected by the system of basement corridors heretofore described. A corresponding house for women, known as the Wyman House, is similarly placed with respect to the corridor, 230 feet from the East House. Both the houses are pleasantly situated among the trees that serve to screen them from other buildings. Their approaches are secluded, so that a carriage may be driven to their entrances quite unobserved. The houses and gardens have a sunny exposure. They have exteriors of red brick laid with Flemish bond. The stone is granite for the underpinning and steps, and Indiana limestone above. The roof is of dark slate, and the interior finish throughout of quartered oak. The floors are of hard pine everywhere, except in toilet and bath rooms, where Italian mosaic is used.

The Wyman House has been given its name in memory of Dr.



WYMAN HOUSE.

applied his name to that one of the hospital's new buildings which is, perhaps, the most unique of all in its adaptation to the special needs of very sick and disturbed patients.

Each of these houses consists of a head house, two stories high, containing three suites of rooms, sitting room and chamber, and a single room. In an extension, which is one story high, there are eight single rooms, arranged in three groups, with two exercise halls, to be used separately or in common. Accommodations are thus afforded for fifteen patients, with special devices for separation singly or in small groups. At the entrances the visitor may pass from the vestibule into a reception room, from which one can go directly to the common parlor in the head house, or, by another way, through a private lobby to any one of the smaller groups of rooms. Each of these groups is provided with a toilet room, and one of the bath rooms on the first floor includes two rooms with fittings for hot air, vapor, rain, and needle baths. There is a marble slab, and the floors are of mosaic tiling; the walls are partly in marble and partly in Keene's cement, covered with enamel paint. A nurse's duty room completes this series of rooms. There are dining and serving rooms on the first floor of the head house, and over these are the service rooms of the second floor, including nurses' duty room. The linen and clothing rooms are well lighted and conveniently placed.

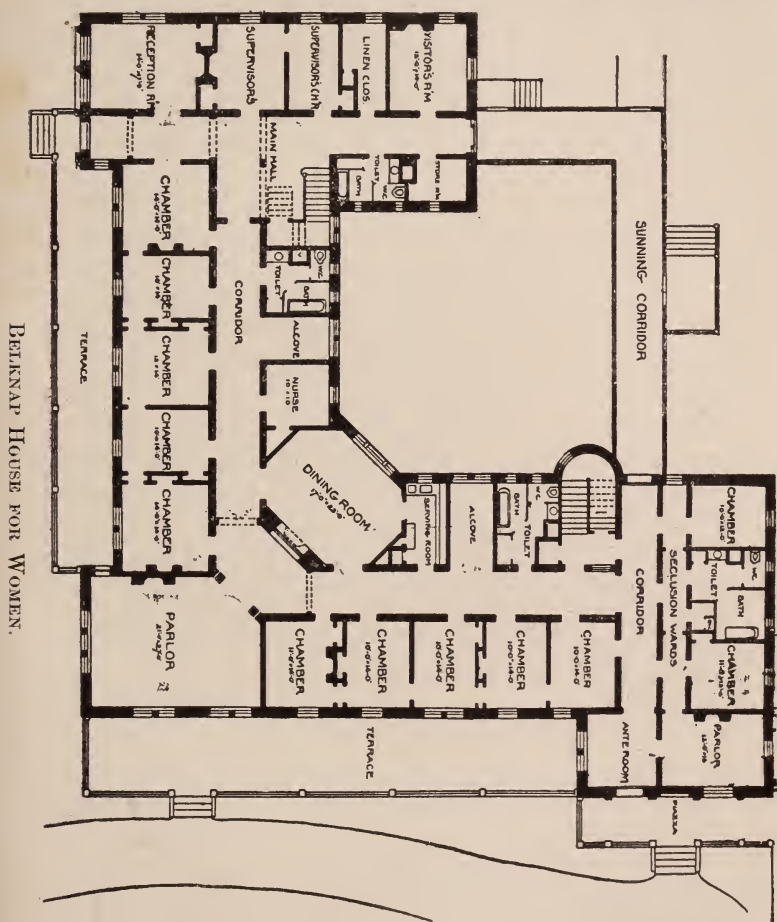
Four of the patients' rooms have their walls covered seven feet high with oak veneered in three thicknesses, forming a perfectly smooth surface for the whole wall. All the corners of all the rooms are rounded. All windows have double runs of sash, for warmth in cold weather and to prevent the escape of sounds to the outer air and thence to adjoining rooms.

The heating is by steam and indirect radiation, and for each room an abundant supply of warm air enters seven feet above the floor. There are ventilating outlets near the floor and ceiling, and the lower one is always open. The upper openings, both for heating and ventilation, are each controlled by a short rod which can be moved by the nurse outside the rooms in the halls. The head nurse in charge of each building has a room near the entrance, and there is one for two other nurses on the second floor of the head house.

BELKNAP HOUSE FOR WOMEN.

The Belknap House for Women covers an area of 8,642 square feet, and will lodge thirty patients. It stands 156 feet to the south-

east of the Administration House, and is connected with it by a basement corridor which leads to two entrances at the rear of the building. The exterior is of red brick laid with English bond. The trimmings are buff Amherst stone. The walls are vaulted, and the roof covered with dark slate. The main house faces the



southwest, and a wing extending easterly faces the southeast; there are two other entrances—the main one in front and the other at the eastern end of the wing. This arrangement, with the two stairways, divides the house into four distinct sections on each of the two floors, each section having a lavatory and other necessary service rooms. By the aid of other devices, the rooms may be used

in small groups for three or six patients each, or single rooms may be isolated from all the others. The rooms occupied by patients are all exposed to the sun at some time of the day, and nearly all face the southeast or southwest; the service rooms look out upon a large garden, the sides of which are formed by the buildings and the low covered ways. This building, being the one of those for women that stands nearest the Administration House, has, in the section first entered from the corridor, the rooms for linen, stores, and a visitors' room, besides the room for the supervisor of the service of that group of buildings. The front entrance opens into the same hall opposite the main stairway, and the reception room at the left of the entrance will serve also as a music room, so isolated that patients will not be disturbed by the sounds from it.

The corridor extending to the right from a door, by which it can be shut off from the entrance hall, leads to a group of five front rooms, opposite which is a lavatory and toilet room, a nurse's room, and an alcove to let in light. At the end of this corridor is a large general parlor—a south corner room admitting sunlight all day. Opposite this parlor, at the intersection of the main corridor with that leading to the east wing, is a large dining room, which is an elongated octagon in shape, with two entrance doors, and an adjoining serving room, communicating with the kitchen below by a lift. In the wing is another group of five single rooms for patients, and opposite them a lavatory and alcove. The corridor here opens both into a stairway and hall, by which there is an exit to the garden, or into another cross corridor leading to a large vestibule forming a sitting room, from which there is an outside door opening upon the eastern porch and terrace. Behind the cross corridor, and separated from it by a lobby, are two isolating rooms, with private lavatory, etc., a small serving room and lift, and a sitting room. It is here that certain new-coming patients may be received and remain a few days, or others may be secluded when very ill.

The second floor has a like arrangement of rooms, except that over the supervisor's and office rooms is a group of four that may be used for the partial isolation of special cases. At the end of the east wing is also a large parlor where, in adjoining rooms, one, two, or three persons may have seclusion and quietude.

In the attic are commodious rooms for about twenty nurses, with accessories of lavatories, etc., and a large, sunny sitting room over the general parlors of the wards below.

In the basement under the dining room there are a kitchen,



PROCTOR HOUSE.

MEN'S BELKNAP.

ADMINISTRATION.

WOMEN'S BELKNAP.

APPLETON HOUSE.

EAST VIEW.

pantry, with refrigerator, etc., small store room, lavatory, clothes room, and sitting room for servants. It is proposed that much of the cooking for the patients in each building shall be done in its own kitchen. This will tend to economy in the consumption of food by improving the manner of serving and preventing waste.

APPLETON HOUSE.

This house is for women; it covers an area of 5,500 square feet, and has a basement, two stories, and an attic. It stands 162 feet to the southeast of the women's Belknap, connected with it by the corridor which leads into the basement underneath a porch and first floor entrance in the rear. The accompanying cut, giving a view from the easterly end of the front group of houses, shows the Appleton House in the foreground. It is nearly square, and its main entrance, with a large porch and *porte-cochère*, is on the northwest side, facing the Belknap as last described. The exterior is of so-called bench brick laid with Flemish bond with white points. The window trimmings are of white marble; the underpinning is of cut granite; the porches, cornices, dormers, etc., are of wood, the roof slated. The entrance hall is spacious and well-lighted and contains a fireplace and handsome stairway communicating only with the second floor, with broad landings, ornamental railings, and spindle work. On the right of the entrance is a reception room with an outlook toward the fine view in front to the southwest. On the left of the hall a corridor leads beyond the stairway to a private inclosed staircase extending from basement to attic. Beyond this is a serving room and a dining room, and an exit to the porch and open grounds in the rear, well shaded by trees.

There are eight suites of rooms in the two stories of the house, each including a parlor, chamber, and private lavatory, bath and closets. Three of these suites are on the first floor and are separated from the hall and rooms previously described by a thick wall running from the front to the rear of the building in both stories, so that the east half may be effectively isolated from the other rooms near the main entrance and those above it. There is a door at each end of the main hall and corridor, opening through the division wall into two other halls on the east side, each having a fireplace. The front and rear halls are separated by a handsome stairway and a large well by which they are abundantly lighted. The front hall has in its front a suite of rooms facing the southwest, and at its side another facing southeast; the parlor of each

of these suites is a corner room with outlook both ways, there being between them a vestibule leading from the front hall to a covered porch that forms the south corner of the rectangle covered by the building. The porch can be inclosed in winter to form a sun room and conservatory. A passage leads from the front to the rear hall, past the light-well, and another suite of rooms occupies the east corner of the building. A private stairway leads to the basement from the passage as well as from the front hall, affording egress by way of the corridor to the gardens and gymnasium in the rear of the Belknap House.

The second floor has five corresponding suites of rooms over those described as being on the first floor, including the reception and dining room, etc., and, by the two stairways, private access can be had to each suite. A peculiar arrangement of these rooms permits direct and easy inspection of each one from the halls by the nurses, or each suite may be isolated, and, with the outer doors closed, each chamber, when occupied by a disturbed patient, will be separated by an intervening lobby from the halls and beyond the hearing of other patients. This house stands higher than any of the others, and faces the attractive outlook to the westward. The rooms on the easterly side have a fine view of Boston and its immediate vicinity over the thickly growing grove of trees near the building. Above the vestibule, and looking out over the porch at the south corner, is a sunny alcove, with a large window arranged for plants in winter.

The attic contains rooms for a head nurse, and about sixteen assistant or pupil nurses; bath, closets, etc., are liberally furnished. The basement contains a kitchen under the dining room, with pantry, refrigerator, etc., and a lift to the two stories above; also a clothes room and a sitting room for the servants.

The heating and ventilating are by the method already described; and each toilet room has a like arrangement of fixtures with a special pipe and vent shaft.

EAST HOUSE.

The East House is for women; it covers an area of 8,123 square feet, and, standing 360 feet in the rear and to east of the Belknap House, is beautifully situated, with well-grown trees around it, and fronts southeast, toward Cambridge, Somerville, and Boston, which are all in view. The plan of this house is similar to that of the Proctor House. It has two stories, with room for thirty patients, and an attic, or third floor, containing rooms for twenty nurses; there is



EAST HOUSE.

a branch of the main kitchen, with adjoining service rooms, in the basement, which is otherwise an airy, open space, containing only the encased steam stacks of the heating apparatus. The building is connected by sections of the basement corridor, already described, with the Belknap House to the west and the Wyman House, which is to be placed about 240 feet farther east.

The exterior of this building is of bench brick, laid with Flemish bond in white mortar. The jambs of the window openings and the exterior angles of the building are quoined with red brick, lighter in color; these bricks are used to form belt courses also, under the cornice and in the gables. The underpinning is of granite. The exterior walls are built solid, with terra cotta furring on the inside to receive the plastering. The roof is covered with dark slate. The main house is 87 feet in length; a wing at the east end extends back 58 feet, and one at the west end $83\frac{1}{2}$ feet. A platform laid with North River bluestone, and having a balustrade, extends along the front, and is reached by a short flight of broad steps, which lead to the central entrance; this is enriched by pilasters on either side, with a cornice over them, and there are mulioned windows on each side of the main entrance. All of these ornamentations, the balustrades, etc., are of buff Amherst stone.

In the interior there is a reception room at the central entrance which leads to the main corridor, extending right and left to intersections of passages to the wings. At the junction of the main house with the wings, the corner rooms are sunny parlors; those on the first floor open by casement windows upon platforms, which can be shaded by awnings in summer. All the rooms for patients have a pleasant outlook; the service rooms, including dining rooms, etc., look toward the large garden in the rear. The corridors and passages on the two floors, for patients, are so arranged as to separate them in small groups. At night the communicating doors are left open, for convenience in attendance and supervision. The three stairways are so arranged as to afford ingress and egress for any one of the different groups of rooms, without disturbing the occupants of other groups. The east wing is especially arranged for patients requiring seclusion and quietude, or for those who are very ill and whose friends wish to be with them; there is a special entrance to this wing.

THE GYMNASIUMS.

The exteriors of the buildings are in old English half-timbered work. Their interior arrangements are similar, and each con-

tains not only a gymnasium proper, but also recreation and work rooms.

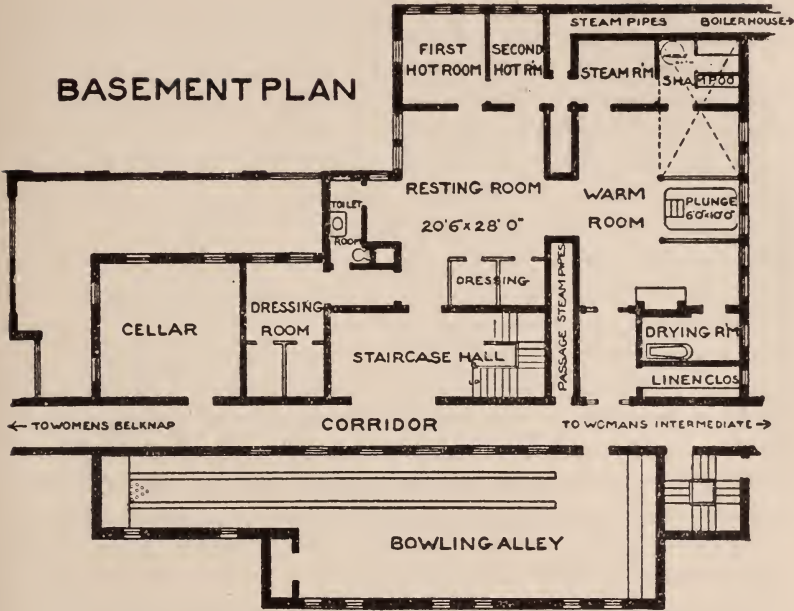
The gymnasium for women is placed midway between the Belknap and East houses, at distances of 110 and 180 feet respectively; their connecting corridor passes through the basement of the gymnasium. It is thus conveniently situated to be reached by covered ways from all the houses for women, in cold or wet weather. Its area is 5,700 square feet. There are a few rooms on the second floor, in the half-story over the front rooms on the first floor; these face to the south, looking out upon a pleasant lawn bordered by trees, between which there are distant views. On its northerly side the building is entered directly from the Belknap House garden.

The basement story shows, on the south side, the windows of the bowling alley; its walls are of brick, and the superstructure is of half-timbered work, with plaster faces on terra cotta blocks. The interior has plastered walls and is finished in ash. The floors are of Georgia pine, except of the toilet rooms, where terazzo tiling is used. The large gymnasium room, forty-two feet square, is open to the roof, where there is a large ventilator. The room is furnished with appropriate apparatus. The window sills are $5\frac{1}{2}$ feet from the floor, and the walls are sheathed to that height with ash. The large adjoining room is intended for mechanical apparatus for passive exercise.

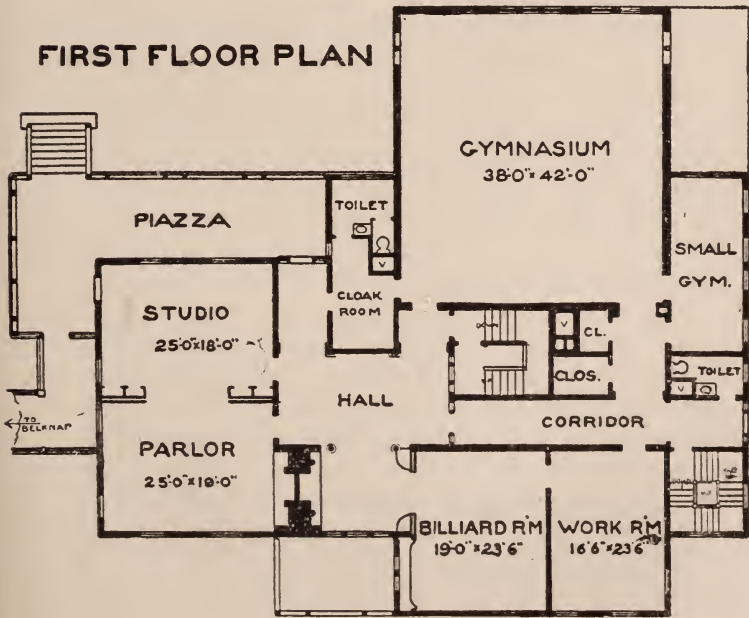
The other rooms on the first floor are commodious and pleasant. The central hall has a wide casement window in front opening upon a veranda which can be inclosed with glass sides and roof, forming a small conservatory. Wide doors open from the hall into the parlor or reading room, containing a piano, etc., to the studio, which is open to the roof, with a good north skylight to the gymnasium and to the billiard room. Next to this is a work room provided with a sewing-machine, embroidery frames, etc.

The basement contains a bowling alley and rooms for a complete system of baths, as shown in the accompanying plan. The floors of all these rooms are to be in squares of terazzo tiling, with corners rounded where they join the bases, walls of tiles or enameled brick to a height of five feet, and the plastering above covered with enamel paint. There are marble slabs and partitions in the shampooing rooms, and a combined needle and rain bath arranged for use of water at any desired temperature. A skylight over these and an adjoining portion of the large room, where there may be grow-

BASEMENT PLAN



FIRST FLOOR PLAN



WOMEN'S GYMNASIUM.

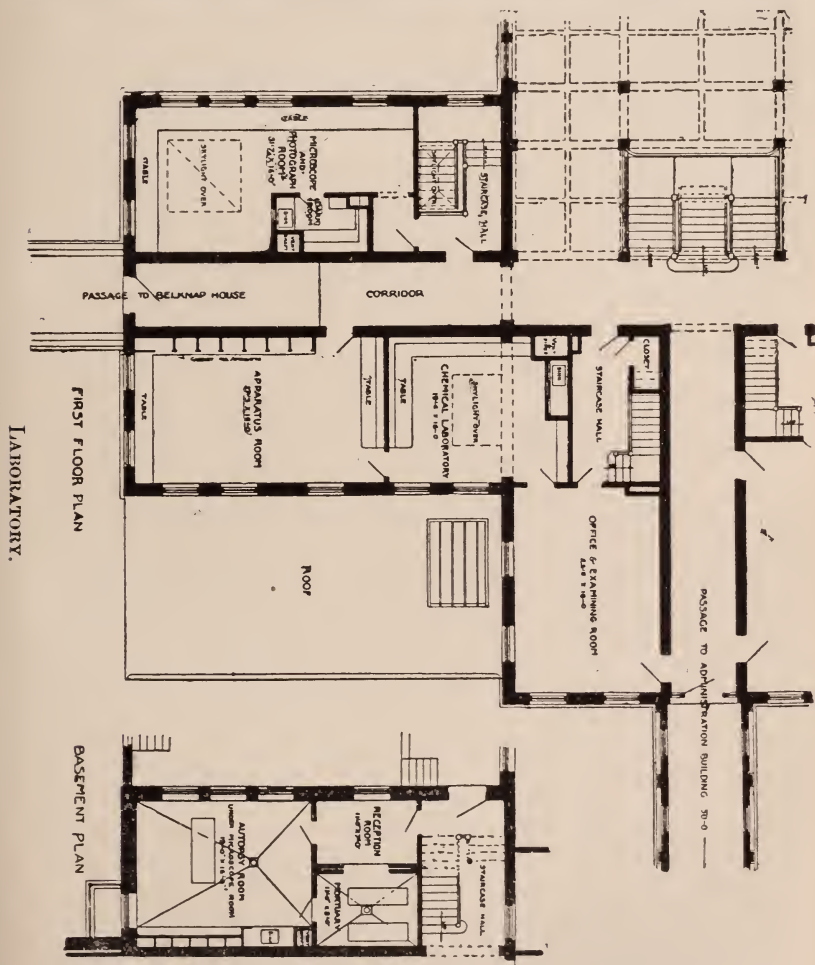
ing plants, will make the place light and cheerful. The plunge bath is 6 by 10 feet, and 5 feet deep. It has steps leading into it and a low railing around it. The sides and bottom are lined with tiles or marble slabs. A fireplace will give added comfort and cheerfulness. Patients coming for special or ordinary baths, or for massage, etc., may spend some time here resting upon couches or reclining chairs. An adjoining drying or rubbing room contains a low bath-tub. The dressing rooms are so arranged that there may be seclusion of one or more patients when desired. The warming is by steam, and indirect. The ventilation is by ducts leading to a vent chamber in the loft.

The gymnasium for men is placed in the rear of the men's Belknap House, and distant from it seventy-five feet. These buildings are connected by the basement corridor system, which at this point is roofed over to form a covered way on the first-floor level, and it being open on the south side forms a sunny promenade in winter. The passage through the gymnasium basement also forms a part of the corridor system, which extends under the bowling alley and beyond it to the Bowditch House for Men; this is at a distance of 230 feet to the northeast of the gymnasium, and the corridor passes under the roadway leading to the rear of the principal group of buildings. The gymnasium and the corridor thus described form the division between the gardens of the Belknap and Proctor houses. The building itself covers an area of 8,070 square feet. The main difference between this building and that for women, above described, is in placing the bowling alley on the first floor, which, with an additional work room, causes the increase in the size of the building. Otherwise the two gymnasiums are virtually alike in their arrangements on the first floor and in the basement bath rooms. The work rooms are arranged with folding doors, so as to be used as one room or separately. They are to have workbenches and other fittings. The two billiard rooms also can be used separately. The exterior finish is of half-timbered work also. The interior is of ash, and the floors of Georgia pine. There are entrances to the building from both the gardens above mentioned. These are pleasantly shaded and adorned by trees and shrubbery, and there is a rocky and picturesque knoll covered with trees at the back of the Belknap garden. There are also convenient walks and tennis courts on the garden lawns. The front rooms of the gymnasium look southward upon the Belknap garden. The arrangement of the bath rooms is convenient and with liberal

space; the fittings are like those in the women's gymnasium. The rooms are well lighted and are comfortable and attractive.

LABORATORY DEPARTMENT.

The rooms for the several purposes of the laboratory are in the service building, previously described as containing also the enter-



tainment hall, etc. At the left of the entrance to this building on the first floor is the office or examining room. One reaches this on leaving the medical offices and library in the Administration House, by passing through a covered way a distance of fifty feet. The

office is a commodious room, containing bookcases, electrical apparatus, appliances for anthropometry, etc. Next is the chemical room, with hood and vent shaft, and other fittings for investigations in physiological and pathological chemistry. Adjoining this is a large room occupying the front of the north wing of the building; this room is for the special work in physiological psychology, and is equipped with apparatus for psychophysics experiments, and the clinical application of instruments of precision in neurological diagnosis. There is another large room for microscopy on the opposite side of the cross corridor, also having a skylight and a dark room for photography; near the latter and at the narrow end of the larger room is a workbench, etc., for the making of apparatus. Underneath the rooms last described are those for the mortuary and reception room and for pathological examinations. The latter has an asphalted floor and is properly equipped with hood, tables, etc., and well lighted by broad windows. The mortuary has a tiled or mosaic floor.

THE CIVIL RESPONSIBILITY OF SEXUAL PERVERTS.

BY ALLAN McLANE HAMILTON, M. D.,

Consulting Physician to the Manhattan State Hospital, Member of the New York
Neurological Society, etc., etc., etc.

Those who read the newspapers are, from time to time, furnished with extraordinary instances of blackmail, where the offender is usually a young man and the victim an older one, and where very often the matter is silenced without any explanation; or of cases of a different nature, where intense and dramatic attachments of women lead to suicides, murder, or divorce. The uninformed simply read these and wonder at their improbability, but the observing physician, whose experience has been at all large, recognizes them as instances of sexual perversion. He will call to mind, if his practice has been extensive, suggestive parallels, which, though they have not led to such dreadful calamities, have resulted in physical and mental wreck, or to family quarrels of a serious nature. The writer recalls numerous alliances of the kind, where, upon two or three occasions, such serious complications ensued as to raise grave questions as to how they should be met.

Anxious mothers, whose faith in the purity of their daughters was so overpowering as to close their eyes to ultimate discovery or confession of degradation, would either not admit the possibility or believe such confessions; or, if finally convinced, would find an excuse in alleged insanity. It is in such cases that the medical jurist has to exercise the greatest skill and caution, for while undoubtedly a certain form of general or special acquired mental disease may sometimes exist, and excuse the actions, there are many others which owe their origin to defect in organization, or education, where the responsibility is only limited. It is for the purpose of trying to help those who are called upon to give advice or to testify, that this paper is written.

Until within a comparatively recent period the mere insinuation that there could be anything improper in the intimate relations of two women would have drawn upon the head of the maker of such a suggestion a degree of censure of the most pronounced and enduring character, but since the publication of the celebrated "*Mlle. de Maupin*," which was written by Théophile Gautier about thirty years ago, and other romances from the pens of French

and German writers, the eyes of observing persons have been opened to the fact that, as the result of a perverted sexual appetite, the relations of individuals may undergo an extraordinary change, so that one person may entertain for another all the ordinary feelings that he or she should feel for the opposite sex. It is difficult, unless one has been brought in contact with such individuals, to believe that close and absorbing intimacies can exist of a purely platonic nature, and while the writer does not for a moment dispute the existence of an all-absorbing friendship which may arise from a similarity of tastes or the congenial enjoyment of many things, or from loneliness, or the desire for society of a particular kind, he realizes, as have others, that a great many of these too close attachments mean a transposition of sexual feeling, which leads to moral degradation, as well as impairment of individual rights, when a stronger will dominates a weaker.

Krafft-Ebing, Moll, Chaddock, and numerous continental and American writers have reviewed the erotic literature of past times, and have collected many personal observations, so that within a short decade a subject which had been boldly discussed by French romancists, and afterward by timid psychiatrists, has been given a definite place in modern psychological medicine, but so far as I know no one has considered the medico-legal bearings of sexual perversion, except with relation to its criminal import.

In a rather extended investigation, which includes a knowledge of American *causes célèbres*, several of which have been personally seen, and as the result of consultations in disputed cases which have not found their way into court, the writer believes that in examples of both abnormal male and female attachments new issues arise. The courts are very apt to brush aside or conceal such cases, or, if tried, they are simply considered as instances of mental unsoundness, which are covered by the ample mantle of "insanity." If they are sufficiently sensational they are accounted for as hypnotism by the newspapers.

That a large number of individuals exist who, from birth, are in nearly every way different from what we are led to expect from their external conformation, is a fact not half realized, and while it is true that some of these subjects of the contrary sexual instinct present a physical departure from the ordinary standard, approaching that of the other sex, there is no arbitrary rule to guide us; but there, nevertheless, exists a dominant mental defect which sometimes is so marked as to absolutely control the individual's relations

with his fellows. The circumstances under which dangerous intimacies occur vary greatly, and we are called upon to consider an active and passive agent, the former being usually a neurotic or degenerate, who is a sexual pervert, and whose life is pretty well given up to the gratification of his or her unnatural appetites.

Of the sexual female examples that have come under my notice the offender was usually of a masculine type, or if she presented none of the "characteristics" of the male, was a subject of pelvic disorders, with scanty menstruation, and was more or less hysterical or insane. The views of such a person were erratic, "advanced," and extreme, and she nearly always lacked the ordinary modesty and retirement of her sex. The passive agent was, as a rule, decidedly feminine, with little power of resistance, usually sentimental or unnecessarily prudish. Sometimes the subjects have been married women, with uncongenial husbands, and they nearly always had no desire for children, resenting the normal advance of the male. Again the unnatural attachment was casual, and in no way premeditated, the two women, for economical or other reasons, living together.

The mere infraction of moral laws, which such an alliance implies, is by no means the only evil that confronts us, for it can be readily understood that the weak victim can be made the tool of the designing companion, and extortion may be the end. Of course where the victim is under age, a variety of legal remedies present themselves, but if the woman be more than twenty-one the matter becomes more difficult, and we are then called upon to decide the question of responsibility, and to determine whether she is insane or not, and should be deprived of her civil rights. The difficulties that lie in the way of controlling the diversion of property may be very great while superficial appearances are apparently perfectly proper.

Several years ago I was consulted by the family of a rich young woman, who had, shortly before, come into possession of upward of \$1,000,000. Her home life had been a quiet and religious one, and she was deeply attached to her mother and brothers, discussing with them her affairs, and under the brothers' direction investing her money, of which she had absolute control. About this time she was induced by a mutual friend to come on to New York and consult a woman doctor with regard to certain trivial uterine disorders, which resulted in her placing herself under the care of the latter. The doctor was a large-framed, masculine-looking woman of about forty, with

short, black hair, a raucous, deep voice, and a manner of talking which was in marked contrast to her patient, who was gentle and refined. When it pleased her she did not hesitate to emphasize her conversation with oaths, and affected the carriage and manner of an energetic and coarse man. Her attire even was affected, and was in harmony with her other peculiarities. The patient's stay in the city in which the doctor lived was prolonged from month to month and finally various members of the family came from the East for the purpose, first, of investigating matters, and afterward of inducing the girl to go home, but without avail. Excuses, at first of a reasonable character, were followed by angry expostulation, and, after some time, the young woman went back to her home, while her medical adviser went to Europe for the summer. Her manner had greatly changed. She was dejected, preoccupied, and constantly talked of the woman doctor in a way to tire the patience of those about her; but in a few months she became elated by the receipt of several letters and, despite the persuasions of her mother, returned to New York and went to live with her medical adviser. About this time large drafts of money were made by the girl, coincidentally with the erection of a large and expensive house by the doctress, whom we will call Miss B., and I was then consulted by the family, and, after much difficulty, obtained an interview with the patient, Miss A., it being represented to her that her mental condition had been questioned. On this occasion she manifested a great deal of hatred to her family, which was unreasonable, and avowed her loyalty to her "good friends," and "defied" me to find her insane. No amount of reassurance and no appeal to her self-respect was of the least use, and she left me in an angry and obstinate mood. At this interview I was impressed with the peculiarity of manner and the intensity of feeling which might be exhibited by a woman who was defending her lover, and her defiant utterances were utterly unwarranted.

Finding I could not influence her in any way, and after ascertaining from the doctor that she was a well woman and did not need treatment, I communicated with her friends and enlisted the services of a female detective. The latter very diligently hunted up evidence, with the result that I learned that a veritable infatuation existed upon the part of Miss A., who went everywhere with Miss B., and who even, at times, occupied her bed. Other information, of a more convicting kind, was subsequently ascertained, and was verified by letters that burned with love and had been written by

the older woman to the girl. No lover could have expressed himself more ardently to his mistress, and there was no doubt but what the stronger woman had not only poisoned the girl's morals, but had alienated her from her home and worked upon her for the purpose of getting her money, which she did.

In this case subsequent inquiry revealed the fact that this woman had debauched several young girls, one of whom eventually committed suicide. Of course, the office of the writer was a most difficult one, for none of the circumstances of the case at the time warranted the assumption of insanity, and at best criminal procedure would have been the only measure available. So far as the intellectual condition of the girl was concerned there was nothing in her conversation that would have convinced an ordinary jury that she was of unsound mind, and at that time her mental perversion was not of a recognized kind.

At best undue influence might have been urged, but the sums parted with, though large, were not extravagant in proportion to her income, and doubtless she would have explained her reason to the satisfaction of a sympathetic body of twelve men. It was with these facts in view that I felt it would be futile to take any steps to declare her a lunatic, and the only thing left was to take criminal proceedings against the other person who possessed such dangerous power. This her family felt loath to do, as the proceedings would lead to very great publicity and probably miscarry.

The different factors entering into the creation of perverted sexuality, when it is not congenital, are of course varied, but in the main consist in an accentuation and morbid exaggeration of the affections so that an almost hysterical derangement follows through an abnormal sensitiveness, which leads the passive agent to indulge in excesses of feeling, especially of a religious and erotic character. In one of these cases an almost insane over-conscientiousness in relation to religious matters was present, and was freely expressed in cant, unnecessary self-sacrifice, and a degree of mock modesty and prudishness which first directed my attention to the behavior of the two persons. The active agent was a school teacher, who worked upon her victim in this way, inculcating a false code of morals which were sophistically alleged to excuse the vice itself. After confession and separation, the depressed and tearful victim not only poured out her soul to her unsexed companion, but daily wrote prayers for her welfare upon small pieces of paper which were found scattered through her effects. There are few precedents upon

which to act when matters assume a dangerous aspect, and it is not until lately that some of these cases have been accounted for by hypnotism. In the general popular adoption of the imperfect phenomena of this mental state most of the inferences are illogical and will not hold. It is rather *influence* than *suggestion*, and does not in any respect differ from any other of an equally persistent kind. As Hirsch has pointed out, there is a radical difference between the effects upon the mind of ordinary influence and that where the true hypnotic state exists as the result of suggestion. In the latter case the morbid conception is entirely out of proportion to the external suggestion, which is not the case where a condition of infatuation exists with perversion. Nothing could be more farcical than the idea of deliberate hypnosis such as has been alleged; the inducement is rather that which suggests what the law-books define as undue influence and is in no sense occult.

The unexplained extravagances of a sexual pervert may raise the question of insanity and lead to an investigation as to his capacity. Such a case was that of Henry B. Palmer of New Brunswick, N. J., which I believe was the first in this country in which the question of this weakness arose in connection with the civil rights of a man, and the writer, who testified before the commission, attempted a differentiation between the various forms of sexual perversion and their relation to responsibility. Palmer, who was an elderly man, and whose brother took steps to have him declared a lunatic so that a committee of his estate and person might be appointed, came under my care a year or two ago. He was a prominent citizen of New Brunswick, where he occupied the position of president of a local insurance company and other offices of trust. His career had been a successful one, and at the time the proceedings were begun he was in possession of a large fortune.

The usual popular allegations of weak-mindedness, untidiness, and physical defects had been made by the petitioner, but the most serious charges were that the old man had not only lost large sums in foolish speculation, but had parted with much of his wealth in some way unknown, which he could not explain. I had been retained by the defendant, and, at my request, he presented himself for examination, and I was immediately impressed, so far as his appearance and conversation were concerned, with the fact that he was not insane, but the victim of avaricious relatives. There was nothing in his mental condition, dress, gait, or behavior that supported the theory of "senile dementia" that had been raised, so

this diagnosis was quickly dismissed and there remained simply the charges of extravagance to be investigated. The chief of these was found to be nothing more than just such a form of speculation as nine persons out of ten occasionally indulge in. The other was more serious, for there appeared to be no doubt but that he had, within a period of twenty-five years, given one individual, who apparently had no earthly claim upon him, amounts from time to time aggregating \$70,000. With some pressing he confessed that he had taken a young boy to the Centennial Exposition at Philadelphia in 1876, and occupied the same room and bed with him at an hotel.

What occurred it is needless to state, but his companion pursued the course of blackmail, which, as years went by, became more and more burdensome and excessive. Upon close questioning I learned that Palmer had never married, and had, from his earliest youth, manifested all the peculiarities of an *urning*. He had, as a boy, shunned the society of little girls and had maintained the most affectionate relations with his own sex, and it appeared that for all the years of his life he had the contrary sexual instinct, and upon only one occasion, when advanced in years, did it seriously render him liable to criminal prosecution. All this time he was a respected member of society and an officer of his church.

When I examined him he showed no indication of incapacity, and made wise suggestions as to investments and business affairs. His was clearly not a case of acquired or involutinal insanity, but the possible loss of personal liberty and his belongings was so imminent, that I advised him to make a clean breast of his weakness rather than to run the risk of being considered irresponsible. In giving my testimony I was permitted considerable latitude, and tried to make plain the distinction between sexual perversion of various kinds, dividing the weaknesses into three varieties, namely, those which were connected with or are the result of insanity, where loss of restraint exists, and where there is a conspicuous defect in intellectual power, and where, of course, responsibility is lost; secondly, a form which is simply the ordinary result of depravity and libidinous curiosity and gratification in which responsibility is not lost; and a third form existed as an index of a defective organization, to which class I believe Palmer belonged. How far he was criminally responsible was a matter for the court and jury to decide, but whatever their verdict might be, I did not regard Palmer as being insane, so far as it presupposed any inability to care for himself or his property.

I am sorry to say that the distinctions I made did not meet with favor, and, probably more for the reputation of the town than anything else, the court held him to be "insane," believing that such a depth of depravity could not be anything else but a mark of insanity. How different would be the decision in Europe, where such forms of moral deficiency are clearly recognized! The consideration of the responsibility of participants in unnatural practices depends very much upon the particular case, and as a rule there is (at least in the beginning) no determining insanity, although later it is not unusual to find melancholia or hysterical mania as results of physical and moral disturbance, and of course under such circumstances incarceration in an asylum and the appointment of a guardian are the first things to be thought of.

The attitude of the law so far is very harsh regarding the punishment of offenders of this kind when detected, when they happen to be distinctly responsible, and it rarely recognizes any extenuating circumstances, and while possibly this restriction is the best for society, there is no doubt but that in cases where a congenital taint exists, some degree of protection should be afforded the possessors of developed mental weakness who are apt to be the prey of designing persons of their own sex.

When contracts or wills are made by one woman under the influence of another, something more should be conceded as an invalidating factor than the existence of a pertinent and dominating delusion, for there is no stronger dominating influence than a continued appeal to the passions, and especially the sexual feelings; and the apparently harmless intimacy of two women may, if misunderstood, lead to the perpetration of great wrongs and diversion of property. As the matter of proof is so difficult, and the rights of women are so zealously, if not unwisely, guarded by sentimental judges, who have gone so far in this State as to deny the opposing counsel the right of physical examination of a plaintiff in an accident case, the matter of determining the degree and depth of the intimacy is often hedged by seemingly insurmountable difficulties, which are increased by the indignation aroused by the merest insinuation that women, in certain ways, can know each other too well.

In my mind a relationship which is carried to such a point that all other ties are neglected, and that personal association approaches that of man and wife, is enough to enable the physician to diagnose a state of affairs that greatly militates against the proper exercise

of free disposing or contracting power; and I hold that under such circumstances not only may the aid of habeas corpus be implored for the purpose of effecting a separation, but that in aggravated instances the physician should, in manner specified, bring the matter before the attention of a committing judge. However, in any case no action should be taken unless the fullest investigation has been made, and the absence of any motive except that of an improper kind can be found. An instance of how great a mistake can be made by a perfectly conscientious and learned medical man was demonstrated in a recent English case, where a young woman of good family and education chose to leave her friends against their will, and practice open immorality with a socialist in London, following the example of the heroine in Mr. Grant Allen's novel.

This girl defended her position as those of the organization she joined did in their speeches and writing, and was evidently conscientious and consistent. Her family, after vain attempts to induce her to return and abandon her mode of life, consulted one of the leading alienists of Great Britain, who committed her to an asylum, from which she was subsequently released.

There was nothing in the history of this case, so far as we know, that indicated the existence of mental disease, although it is by no means certain that she was not a degenerate, and the doctor's conclusion was apparently based upon the unconventionality of her act. It must be seen at a glance that medical or legal interference are just as much out of place here as they would be where alleged insane persons have been spiritualists, or have consistently acted up to a principle, no matter how unpopular, immoral, or absurd. It can be readily seen how, for instance, such a person as the defendant in the English case might have shown other evidences of insanity, and how her particular act under some circumstances could have been irrational. In the cases that form the subject of this paper the issues are different, for certainly nothing but a deprecable tendency or morbid appetite could lead to disregard of various obligations, loss of reputation, and censure.

THE NEW NEUROGLIA STAIN OF CARL WEIGERT.

BY M. N. VOLDENG, M. D.

For the past seven years Professor Weigert, whose contributions to neurological science are well known, has endeavored to bring a reliable neuroglia stain to perfection, and this he has now succeeded in doing, although he admits that the method may, and no doubt will, be somewhat improved.

On the 3d of November last the details of this new neuroglia stain were given to the scientific world by the author for the first time, in an address delivered at a banquet given on the occasion of the fiftieth anniversary of the medical society of Frankfurt a. M. The method is now being thoroughly tried in the neurological laboratories here.

I will state briefly the different steps as they are laid down by the author:

The method is only applicable to human nervous tissues. All experiments upon the tissues of lower animals have been a failure. The tissues must be absolutely fresh; that is to say, the subject from which they are taken must not have been dead over twenty-four hours; the fresher the tissues the better are the results likely to be. The pieces to be used must not be over one-quarter of an inch thick, and great care must be used in order to prevent mutilation of the tissues during their removal. Pieces thus removed are immediately placed in a 10 per cent watery solution of formol; after twenty-four hours the solution is renewed. In from five to eight days the pieces will be found sufficiently hardened and ready for the next step, but they may remain in this solution for an indefinite length of time without injury. During the first few days of hardening, a glass-covered vessel should be employed, the bottom of which is covered with filter paper; too great care can not be used at this time in handling the pieces, as they are very soft and easily mutilated. This is the so-called "fixing" or "hardening stage." The hardened pieces are now placed in the following solution:

5 per cent of acetate of copper,
5 per cent of acetic acid, and
2½ per cent chrome alum in water.

In preparing this solution, the chrome alum should first be boiled

in the required amount of water, and while the water is still boiling add first the required amount of acetic acid and then the acetate of copper; stir thoroughly with a glass rod until all of the sediment has been removed. In this solution the tissue should remain for a period of from four to five days if the incubator is used, and for a period of at least eight days in the ordinary temperature for a living room. Even better results may be obtained if to this solution 10 per cent of the formol solution is added, and in that case the tissues, after twenty-four hours, should be placed in the ordinary copper solution, where they remain for the rest of the time. This is the so-called "mordication process." The process of fixing and mordication may be united if the tissue is only intended for the neuroglia stain. The pieces are now removed from the copper solution, thoroughly washed in water, then dehydrated with alcohol and next thoroughly infiltrated with celloidin, which is done in the usual way. The pieces are now mounted on cork, and are ready for the microtome. The section cutting is done in the usual way; the sections should be exceedingly thin if the best results are desired. The cut sections are stained with the following solution and in the following manner:

Make a hot saturated solution of methyl violet in 80 per cent alcohol. To 100 c. c. of this solution add 5 c. c. of a 5 per cent watery solution of oxalic acid. The section is now carefully transferred to the slide, a drop or two of the solution is placed on the section. The superfluous fluid is removed by gently placing several thicknesses of filter paper directly over the section, lightly moving the fingers back and forth over the filter paper until the section is dry.

The next stain is the so-called "iodine stain"; this is a saturated solution of iodine in a 5 per cent solution of pot. iodid.; of this solution, several drops are placed over the section and the superfluous fluid removed in the usual way; the section is cleared by employing a solution consisting of equal parts of aniline oil and xylol; after this is done, the remaining oil in the section is removed and further cleared with pure xylol. The section is now ready for the balsam and cover glass. The tissue has a strong affinity for the staining agents, and the various steps should be done rapidly, care being taken not to leave the section dry for any length of time. All of the staining should be done on the slide in order to prevent unnecessary mutilation of tissue. After the sections are mounted they should be exposed to good sunlight for a week. This consti-

tutes the simple neuroglia stain, where nothing but neuroglia tissue is stained, all other tissue remaining unstained. If we also desire to stain the nervous tissue, the following addition is made: The sections taken from the microtome are placed for about ten minutes in a one-third per cent solution of pot. permanganate, then thoroughly washed in water; after this the sections are placed in a solution of chromogen, which is made as follows:

Dissolve 5 per cent of formic acid in water; filter carefully; before using add to 90 c. c. of this solution 10 c. c. of a 10 per cent solution of sodium sulphate (such as is used in ordinary photographic work). In this solution the sections remain for a period of from two to four hours, when they are thoroughly washed in water; the sections are now stained according to the method already indicated. This step is known as "reduction."

In the single neuroglia stain the neuroglia fibers and cells are stained blue; if the reduction stain is employed, all neuroglia tissue remains blue, while the ganglia cells with their axis cylinder processes are stained yellow. The reduction process may be improved by placing the sections which have been removed from the reduction fluid into a simple saturated water solution of chromogen, where they remain for twenty-four hours. At the end of this time the sections are again washed in water and then stained in the usual way.

By the discovery of this stain the author has demonstrated that there is no such a cell as the Deiter cell, and that what has heretofore been regarded as Deiter cell processes are not processes at all; on the other hand, they are neuroglia fibers lying round about a neuroglia cell and have no direct connection with the cell itself. It is thus seen that this new method is destined to become a great aid in studying the histology of the nervous system. What benefit it will be to morbid anatomy remains to be seen.

SUMMARY.

1st. The method is an elective one; that is to say: Nothing but neuroglia tissue is stained, unless the contrast stain is also employed.

2d. The method is sure and reliable in the main, though not absolutely so as yet.

3d. Rapidity of hardening or fixing without making the tissues brittle.

4th. It is believed that sections prepared in this manner are not likely to be durable.

5th. After the tissue has been subjected to the fixing process it is also well adapted for other staining methods, namely: Marchi, Golgi, Van Gieson, Nissl, hæmatoxylin, and carmine. This is of great advantage, inasmuch as it is always desirable to employ a number of different stains for the same tissue.

LABORATORY OF PROF. MENDEL, BERLIN.

EPILEPTIC INSANITY.

BY JAS. G. KIERNAN, M. D.,

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Epilepsy is likely to attract attention in any of its aspects. It is, therefore, not astonishing to find that its relations to insanity were perceived at a very early period.

Shakespeare (whose chief publisher issued more than one work on the brain and nerves) seems to have observed post-epileptic insanity (and put upon it the popular interpretation), for he remarks in "Othello" (Act IV, Scene 1) :

IAGO: "My lord is fallen into an epilepsy;
This is his second fit; he had one yesterday."

CASSIO: "Rub him about the temples."

IAGO: "No, forbear;
The lethargy must have his quiet course;
If not, he foams at mouth, and by and by
Breaks out to savage madness."

Over 200 years ago Zacchias* called attention to certain pre- and post-epileptic psychic phenomena. To the epileptic alienation are frequently due the most brutal and purposeless crimes. Many a deed which has shocked and startled a community has been committed by epileptic lunatics.

The relations of epilepsy to insanity are by no means simple. Epilepsy may be merely a complication, or a sequel, or a preliminary to recovery, in certain psychoses. None of these cases, however, belong to the true epileptic alienations. Epilepsy produces these psychoses, and they are essentially epileptic at bottom. Two broad types of epilepsy are usually recognized — the epileptic mania and the epileptic dementia — but outside of these occur numerous mental manifestations, which are exceedingly important from a medico-legal standpoint.

Krafft-Ebing† divides the mental manifestations arising from epilepsy into: The psychical degenerations (epileptic dementia); the transitory epileptic psychic disturbance (preceding, following, or replacing convulsions), further divided into: (1) Epileptic

* *Questiones Medico-Legales.*

† *Lehrb. der Psych.*

stupor. (2) States of imperfect or dazed consciousness with fright (Falret's *petit mal intellectuel*); with frightful delusions and hallucinations (Falret's *grand mal intellectuel*); with expansive religious delusive conceptions; with dreamy stupor; with dreamy stupor followed by rapid flights of ideas; the epileptic psychoses which stimulate ordinary types of insanity, but present certain symptomatic peculiarities and have an epileptic basis.

Spitzka* makes the following division valuable for clinical purposes: *First*. The epileptic psychic equivalent, which replaces the epileptic convulsions. *Second*. The acute post-epileptic insanity, which almost immediately follows the convulsive attack (the ordinary post-epileptic stupor being included as part of the convulsion), or the psychic equivalent of such a convulsive attack. *Third*. The pre-epileptic insanity, which precedes the outbreak of the convulsive attack, or its equivalent, and increases up to the amount when the paroxysm explodes. *Fourth*. The purely intervallary epileptic insanity, which, neither immediately following nor preceding a paroxysm, occurs in the interval between the convulsions. *Fifth*. Epileptic dementia, which may complicate any of these psychoses and render their diagnosis, when occurring in old cases, difficult.

C. H. Hughes states that there may be ante, post, or supplemental paroxysms of maniacal automatism in which acts, apparently in a volitional manner, but without free or voluntarily directing will, are performed. These acts may be violent or incendiary, or otherwise destructive and criminal, as well as harmless.

Falret alludes to the intervallary form in the following language: "A remarkable phenomenon which frequently complicates the incomplete attacks of epilepsy, or in the intervals between two perfectly developed attacks, deserves mention. The patient seems to have come to himself; he enters into conversation with those persons who surround him; he performs acts which appear to be regulated by his will, and seems to have returned to his normal state. Then the epileptic attack recommences, but as soon as it has ceased and the patient has recovered his reason, it is found that he has not preserved any recollection, either of his words or acts, which were said and done in the interval of the two attacks." Under the head of "*Petit Mal Intellectuel*," Falret describes a condition which may continue for several hours, or several days, after the post-epileptic stupor has subsided, in which the patient becomes sullen, deeply dejected, very irritable, and feels an utter inability to fix his

* Insanity.

thoughts and control his will. Under the term "Grand Mal Intellectuel" he describes an analogous condition of longer duration, intermingled with alternate stupor and furious excitability.

Although not correlated, these forms have long been recognized by nearly every alienist of repute. Griesinger* says: "Striking psychic disturbance sometimes occur before the attack; sometimes a confusion and obscuring of the consciousness, resembling drunkenness; sometimes deep dejection; sometimes an extremely suspicious, angry disposition; sometimes violent hallucinations of any and all the senses immediately precede the attack. During the attack, in fully developed cases, the psychical faculties are completely suspended, the patient can not remember any act which happened at the time, although his fixed, terrified, astonished expression gives the impression that he is suffering severe mental pain. Attacks may precede and alternate with intermittent convulsions. Others, after partial or complete loss of consciousness, execute combined movements, which correspond to a state of dreaming of a varied, but, as a rule, of a depressing nature."

In discussing the forms of epileptic alienations, the *epilepsia larvata* of Morel, the masked epilepsy of the English authors, should be considered. This form described first by Falret, and soon after independently by Morel, is marked by the following symptoms: "The invasion of these attacks is sudden. There is always loss of memory of them. The acts done in them are instantaneous and of an exceptional violence. Hallucinations, when present, are always terrifying, and at every attack the same phenomena presents itself." Morel says: "The masked epilepsy condition presents peculiar symptoms, among which may be found at the onset excessive instability and mobility of character. Later, transformation of delirium reproduce themselves in a true periodicity." Sankey makes similar observations.

From my own observation so-called masked epilepsy seems the purest form of epileptic psychic equivalent. There are then, based on chronology, five varieties of mental alienation due to epilepsy—the pre-epileptic insanity, the psychic equivalent, the post-epileptic insanity, the intervallary insanity, and epileptic dementia. Epilepsy produces, in my experience, about $4\frac{1}{2}$ per cent of the hospital cases of insanity. Regarding the frequency of the various forms it may be said that epileptic dementia occurs most often in hospitals.

In my experience the existence of the psychic equivalent alone

* Mental Diseases.

is more frequent than usually indicated. The intervallary epilepsy occurred, in my experience, in about 2 per cent of the epileptic alienations. The equivalent not infrequently manifests itself in the form of moral perversions only. The patient is a dipsomaniac, or exhibits sexual perversion, or is a kleptomaniac during the psychic equivalent, being perhaps perfectly moral and upright at other times. Sometimes murderous attacks are made during the psychic equivalent, which ceases with the crime. Checking epileptic attacks by treatment may bring on this condition, as in cases reported by Bannister, Stark, Spitzka, Harriet C. B. Alexander, Hughes, Jewell, and others under my own observation. Hughlings Jackson insists that when mental symptoms appear to replace the fit there is a very transitory epileptic paroxysm, but he admits that very frequently no signs of such are discernible. Witkowski denies that there can be a psychic equivalent of epilepsy. His emphatic denial and Hughlings Jackson's theoretic opinion do not offset the positive, well-defined clinical evidence.

The epileptic psychoses, as a rule, are characterized by extreme violence; by, not infrequently, initial hallucinations, and by sudden subsidence of such symptoms. Epileptic dementia, when present, may mask all these, but even in dementia the epileptics display marked treachery.

Magnan and Delasiauve find that in epileptic dementia, varying with the gravity of the mental condition, the attention is enfeebled and null; memory confused, untrustworthy, and at times entirely lost; conceptions are obscure, abortive, or false; following a train of thought is painful, incorrectly done, and at times impossible; the imagination is not markedly developed. From this intellectual mutilation results mental enfeeblement.

The physician who is brought in contact with cases of epileptic insanity frequently finds, as the most prominent symptoms, certain moral manifestations, an instance of the absurdity, from a scientific point of view, of the resolution adopted by the New York State Medical Society at its 1882 meeting, namely: "That the true function of the medical expert is to expound and interpret the results of pathological conditions, and that in the absence of disease he is not justified in drawing conclusions as to civil responsibility from moral manifestations of conduct, that department belonging exclusively to law." *

* It is only just to add that ten years later the society retracted this unscientific cant and placed itself in psychiatric accord with the time.

In epileptic insanity the alienist often has to reason, so to speak, in a circle; the character of the immoral act suggests epilepsy; the physical and other evidences being found, the act is regarded as of epileptic origin. These physical symptoms become of value as corroborative evidence. Certain authorities have laid stress on asymmetry of the face and skull as evidence of epilepsy. Howard has found such asymmetry in 80 per cent of the insane epileptics coming under his observation. Garel has found 55 per cent of the epileptics coming under his observation to present asymmetry. This symptom is, however, chiefly of value as leading to further investigation and as evidence of a congenital or hereditary condition. Echeverria, who is corroborated by Howard, claims that the temperature of epileptics is always below normal. Echeverria also calls attention to a marked lividity conjunctiva injection, and at the same time to a frequent expression of hebetude and astonishment. Epistaxis is not infrequent during or after the paroxysm. He and L. C. Gray lay stress on a dilated mobile pupil as further evidence. It should be remembered that attacks occur at night, and blood upon the pillow and other circumstances may give indications as to the possible existence of nocturnal epilepsy. If the suspected attack of epileptic insanity be, as it often is, very brief, there will be noticed just precedent, great irascibility, succeeded by sudden pallor, furious violence, and slight after-stupidity. Often an epileptic displays great religious tendencies. When a lunatic evinces marked religious delusive conceptions, is at the same time in a condition allied to stupor, kneels and prays to the physician, epilepsy may be suspected. I had a marked illustration of this in a patient who entered the insane hospital, in consequence of developing insanity at the 1876 Moody-Sankey epidemic in New York. His insanity presented the character just described. His hereditary history was bad. After some months' residence in the asylum he had several epileptic attacks.

Is an epileptic always irresponsible? If his insanity be simply of the post, pre, or psychic equivalent form, it is safe to say that in the period between the attacks he is at least partially responsible. If the crime be committed under criminal motives; if the same be inconsistent with the form of insanity with which he suffers; if his recollection be perfectly preserved of the crime, this being tested other than by leading questions, then the epileptic should be held responsible. At the same time the alienist examining an epileptic should always be careful to subject every statement made to con-

siderable scrutiny, since a crime resulting from epileptic psychic phenomena may be preceded by a feeling of depression; may be accomplished with comparative deliberation, and there may be a motive mixed up with an insane condition. It may be followed by excitement. The patient may lose all consciousness of the same until a return of the insanity, when he may remember the circumstances of the crime of which he was ignorant during the period of intelligence.

Even the circumstances of a psychic equivalent are sometimes seemingly clearly remembered. Cases occur where epileptics recollect hallucinations occurring during the attack. These seem to indicate the occurrence of consciousness during the epileptic attack, but such recollections are really the results of a different cause, and one which gives rise to the so-called delusions of memory. Meynert has pointed out that these remembrances have the following pathogeny: An epileptic attack occurs in consequence of an arterial spasm of a hemisphere. It may readily happen that this spasm may occur in but part of a hemisphere. When this spasm proceeds to the extent of complete occlusion, collateral hyperæmia will result, engendering an irritation, a pronounced contraction of a vessel, leading to a diminution of pressure in collateral branches. These phenomena do not produce an hallucination; but the hyperæmia in question may produce a delusion of memory at the time the hallucination occurs, by causing the subjective sensation to receive such colors that the sensorium retains the imprint of it. While this is not a true memory, it approaches so closely to it that differentiation by an unskilled observer is impossible.

F. P. Norbury * denies that epileptic acts are conscious, and would exclude acts seemingly conscious from the domain of epilepsy. There are many acts seemingly conscious performed by epileptics in states of unconsciousness. The mere appearance of seeming consciousness is no evidence of a conscious directing will. If there be other evidence of epilepsy, seeming consciousness during acts in violation of law is not disproof of epilepsy. The epileptic mental state often closely resembles the hypnotic. Indeed, in slight post-convulsive stupor, hypnosis is readily induced. Epilepsy shocks the mental unity constituting the ego, similarly to the shock given by suggestion or hypnotism. The cases reported by Bannister, † while not proving (in my judgment) the existence of con-

* Medical Fortnightly, April 1, 1896.

† Neurological Review, 1886.

sciousness, demonstrate that mental states closely simulating it, and not demarcable except by analysis, occur.

C. H. Hughes* has reported cases in which consciousness has been seemingly preserved in its entirety, which may be explained in like manner as are remembrances of hallucinations.

These points are well illustrated by the case of a patient under my charge who has the following history: His grandmother and sisters were subject to "fainting spells" from their twelfth year. During his childhood and youth he had these fainting spells, but nothing further. His first attack of grand mal occurred at the age of nineteen, while on guard at Fort Yuma, Ariz., and exposed to an intense solar heat. The attack was preceded by an hallucination of a beautiful woman, who placed herself in lascivious positions before him. This hallucination produced a seminal ejection, which was followed by grand mal. For several years this hallucination has preceded an attack. It remained until the patient was placed under potassium bromide, when the hallucination was replaced by another of a devil darting a trident at him. When this reached his forehead he became unconscious.

While under this treatment he had attacks of post-epileptic insanity. On one occasion, just previous to an attack, he was very irascible, and engaged in a heated political discussion. During this, his face suddenly became pale, his pupils dilated widely, and for a moment his face had a blank expression. He seemingly recovered from this, and pursued his opponent in the argument with an open clasp-knife, which he held by the blade, making several stabs at the latter with the handle. The excitement disappeared suddenly, and it was found that the last thing he remembered was the political argument; the rest was blank. He said he believed that he had been very irritable just previous to the argument, this irritability resulting from an indefinable dread. The patient has been placed under ergot, conium, and amyl nitrite. Under this treatment and cold sitz bath, cold sponging, and prohibition of meat, the convulsions and psychic phenomena have failed to appear.

It will be obvious that the circumstances, which show the mental phenomena to have been of ante and post epileptic nature, are such as would be ignored by the average observer. The stabbing with the handle in lieu of the blade was purely accidental, dependent on the way the knife was seized by the handle, otherwise the opponent

* *Allenist and Neurologist*, 1883.

might have been dangerously wounded. If this had occurred, how hard it would have been to convince a jury of the prisoner's irresponsibility for this act! He was irascible on account of his epilepsy; the excitement of the political discussion caused an apparent anger, and by a less intelligent observer than his opponent (his employer) the precedent symptoms of his violence would have passed unnoticed, more especially if his disease had been unknown.

A female observed at the Cook County Insane Hospital becomes vividly hallucinated (the hallucinations having relations to anal, vaginal, and buccal coitus with three saints) precedent to the attack. After the attack the patient attempts for a week to establish buccal voluptuous relations with her fellow patients, some of whom accept such relationship, but others repel it. The patient then, after a period of three days of dreamy stupor, becomes intelligent and well conducted. Her attack is often signalized, precedent to the hallucinations described, by furious masturbation, with coincident vivid sexual hallucinations. She has an indistinct, dreamy remembrance of the hallucinations; they are in her mind as acts she has either committed, or of which she has thought, and which to her are extremely repugnant.

In a similar case reported by Howden,* the patient, a male, had vivid hallucinations of sexual congress with female saints, which for a time preceded the attack, but at length took its place. The hallucinations, precedent to the attack, were imperfectly remembered as dreams. Of the psychic equivalent hallucinations there was no recollection.

Sometimes when, as in a case reported by Esquirol, the psychic equivalent is an imperative conception, this is remembered fully. Esquirol's case is that of a Swabian peasant, who became epileptic at the age of eight, the epilepsy being of the grand mal type. He continued to have convulsions until his twenty-fifth year, when these were replaced by an irresistible homicidal tendency, preceded by an aura, during which the patient recognized his imperative conception as illegal, but irresistible. He demanded restraint when he felt the onset of the aura.

Bevan Lewis† reports the case of a neurotic of bad heredity, who, as he slept beside his wife, imagined he saw two burglars rifling the contents of a chest in his room. He sprang out of bed and, according to his own statement, as he rushed from the

* Journal of Mental Science, 1873.

† Mental Diseases.

room for help, he saw one of the men strike his wife with a hatchet. He remembers nothing more, but was found by a policeman (to whom he made the above statement) wandering in the streets, vacant and confused, and holding a hatchet in his hand. The evidence demonstrated that he had had a fit, preceded by the visual aura of the burglars in his room; that the idea of the hatchet prompted him to rush down-stairs to the cellar, and that during the automatic period he killed his wife.

Clouston* states that a young epileptic, H. G., very friendly with Dr. Clouston when well, used to dislike him very much when excited after fits. On one occasion the attendant found him and another patient contriving to make a weapon with which to assault Dr. Clouston or the chief attendant, out of a stocking which the epileptic had taken off, put a stone into the toe, tied a string about this, and then slipped up his sleeve till he should have a chance to use it. When out of the epileptic mental condition, he was astonished when told about this, and had no recollection of it. The combination with another patient and the purposive combined preparation of a lethal weapon all occurred in a state of epileptic altered consciousness.

In analyzing the psychologic state the fact should not be forgotten that, as pointed out by Bevan Lewis, the epileptic is notably cunning, and often much given to shamming, not bodily ailments alone, but mental also, usually with the object of obtaining some desired indulgence. It is by no means infrequent to discover an epileptic girl "shamming" a fit or affirming that she suffers excruciating pain, etc. Such a subject arraigned on a trial of murder would be most likely, if he thought the plea of insanity would save his life, to produce his former experience and assume delusions from which he might have suffered at times. In the case of *Regina vs. Taylor*, where the prisoner was charged with the murder of his infant child and of the police superintendent, it was believed that the statements advanced by the defense as evidence of delusional perversion (obtained just prior to his trial) were of this nature. The closest observation and repeated examination during his early imprisonment wholly failed to elicit a deluded state. It is strongly suspected that the frequent subsequent examination which he underwent suggested to his mind the policy of malingering. That he was fully aware of the gravity of his offense and the probable issue, was made apparent by his statement to a fellow-prisoner on

* Mental Diseases.

the night preceding the trial, that he would probably have to go to a lunatic asylum, a recognition of his position wholly inconsistent with the assumption of the defending counsel that the prisoner was a complete mental wreck. That he was subject to delusions about the time of his fits could not be doubted, and that the murderous act was instigated by such delusions is equally free from objection, yet the facts that a period of some months had elapsed without such a seizure, and that no clue to delusion was forthcoming until just prior to his trial, were strong evidences in favor of his malin-gering. In this case no epileptic seizure had occurred for three months subsequent to the murder, and the question as to the existence of epilepsy in his case required examination. It was found that his neighbors and fellow-townsmen knew little or nothing about his "fits," and evidence as to such could only be obtained from interested parties — his wife, parents, and a lodger. But here again, on the other hand, it was obvious how readily a genuine description of epileptic seizure may be recognized from a feigned account. A most graphic account of grand mal and petit mal was given by each witness separately examined, consistent with each other in every detail, evidences which most distinctly would have broken down if the witness had not actually and individually witnessed the seizures. Another question of interest in this case was the actual condition of the prisoner's mind at the time of the act. Was the act characterized by impulsiveness, or was it the outcome of the delusions previously fostered? There is little room for doubt that the act was deliberate and intentional, according to his own account. He had for hours barred himself within his house, handling a loaded gun; his pockets contained several loaded cartridges, and it was only after watching his pursuers for some long time through the window of the house that he eventually took deliberate aim "behind the ear" of the police superintendent and discharged his gun. He both intended to kill his victim and fully recognized the surrounding circumstances. In short the act was clearly not the impulsive act of epileptic furor, but the well-planned and determined act of a deranged mind prompted by delusion. This criminal lunatic has, in a fit of maniacal fury, destroyed his eyesight by self-inflicted violence at the Broadmoor Criminal Asylum, and in a letter subsequently dictated to his wife stated: "Old Satan told me to pull out my eyes and I can not see at all now."

The explanation of these cases, while partially that of the patho-

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geny of delusions of memory, as already pointed out (Meynert *) is, however, that they are due to the essential pathologic basis of epilepsy, which, as Spitzka remarks, † is a diseased state of the encephalon without a palpable characteristic lesion, manifesting itself in explosive activity of an unduly irritable vaso-motor center, leading to complete or partial loss of consciousness, which may be preceded or followed by various phenomena, expressing the undue preponderance of some, and the suspended inhibitory influence of other cerebral districts. Epilepsy is due to arterial spasm. This fails to effect the entire cerebral cortical surface in some cases simultaneously. Some one trunk is more pervious; an afflux of blood occurs in the district supplied by it. In this district certain motor innervations are located and certain impressions stored. This relatively well-nourished district has its function exalted, and hence the purposed speech, seemingly deliberate motions, and peculiar hallucinations of sight, hearing, and sensibility which make their appearance either as aura in ordinary epilepsy or as the epileptic psychoses just described.

This pathogeny clears up the relationship between melancholic furor, transitory frenzy, and the epileptic psychoses. An interesting case involving this relationship was reported by Dr. H. R. Stedman ‡ to the New England Medico-Psychological Association some years ago. The patient, from her childhood until her nineteenth year, was subject to seizures, when she would fall down unconscious, knowing nothing of the circumstances except what she was afterward told. The disappearance of these attacks in her nineteenth year was followed by the onset of menstruation. She had one attack in her twenty-sixth year, when six weeks pregnant with her eldest child. This was exceedingly severe. She subsequently bore four children, the youngest five years, before she was placed in the insane hospital (1882). Her home life was most happy until two and one-half years prior to admission, when her husband, forming another attachment, began to abuse her and the children. She was trachelorrhaphized in the Massachusetts General Hospital a year and a half prior to admission. On her return home her husband threatened to send her to an insane hospital, and soon after deserted her to live with his new attachment, furnishing her with meager support. The winter precedent to admission, her health began to

* Psychiatry, Sachs' translation.

† Medical Standard, Vol. I.

‡ Alienist and Neurologist, 1886.

fail; her sorrow over the past and anxiety as to the future increased, and she became insomniac. New Years Day suicide was contemplated, and three months later the idea of killing her children occurred to her on reflecting that after her death they would be still more unfortunate. She suffered from a pain in the head, and frequently a sense of bewilderment and confusion came over her, until she hardly knew what she was doing. Soon she slept hardly at all. Once she arose to kill herself and children, but her resolution failed. One night, six weeks before admission, she slashed the arm of one of her boys; she is uncertain which. From the time the blood flowed until after her removal by the police she remembers nothing. She killed the youngest child, wounded all the others, and inflicted several wounds on herself. When Dr. Stedman examined her first, she was quiet, but had an intense expression of anguish. She had no delusions, but an overwhelming sense of the enormity of her crime. Greatly agitated, she burst into tears on reference to her dead child, and said she could not believe he had gone. She saw nothing but sorrow ahead for herself and the others, and wished she were dead. The patient's sister and daughter were epileptics. Dr. G. F. Jelly, who examined her in jail, found her in a state of profound melancholia. She had, during her hospital sojourn, "dizzy spells," attended by transient loss of consciousness and subsequent mental confusion. From these data Dr. Stedman was convinced that the case was not one of primary melancholia with frenzy, aggravated by the epileptic impulse, but one of automatic violence in an epileptic state, occurring in a person of melancholic temperament during a fit of depression.

In the discussion of this case, Dr. Baker expressed the opinion that convulsions in early life predisposed to adult melancholia. Dr. Goldsmith, from an examination of the case, was unable to tell when consciousness ceased. The woman had clearly thought of the homicide for a long time. When she passed into an epileptic state it was the most natural thing to do. In Dr. Jelly's opinion, melancholic frenzy would suffice to account for her lack of consciousness. According to Dr. Fisher, complete loss of consciousness might occur in melancholic frenzy for a time. Epilepsy was not a necessary factor in this, although it might have been present in Dr. Stedman's case. Dr. Stedman, in concluding the discussion, expressed the opinion that sudden cessation of melancholic symptoms after subsidence of the patient's natural out-

burst of grief and despair at what she had done, was difficult to explain on the ground of uncomplicated melancholia.

The fact, however, should be remembered that melancholia has a tendency to paralyze natural expressions of grief. When these occur they are good evidence that in the melancholia has occurred a vasomotor perturbation, such as often produces even exaltation temporarily in melancholia of favorable prognosis. In melancholic frenzy there is often complete amnesia of complicated acts. As Spitzka* has shown, in melancholic frenzy the patient appears as if relieved by the explosion, and he awakes as if from a dream, of which he has but an obscure, if any, recollection.

While there are suggestions of epilepsy in Dr. Stedman's case, aside from the psychic phenomena, these last are not necessarily epileptic in type, since they might have appeared in a melancholiac with the history given. Unconsciousness of complicated acts is, hence, not proof positive of epilepsy.

Conscious mental disturbance, moreover, may appear as a consequence of the epileptic habit. One of Dr. Bannister's† cases was consciously coprolaliac after an attack.

Dr. Harriet C. B. Alexander has reported the following analogous case: The patient was a woman of bad neurotic heredity on both sides. By medical advice, for therapeutic reasons, her father paid a man to marry her. She had three stillborn children, and five others died in convulsions. She has pre, post, and equivalent insanity; she is troubled by coprolaliac impulses between the demonstrably insane periods, when she ties a bandage around her mouth to assist her will in restraining them, which it does. She is obliging and good-tempered between the attacks. Under the bromides she becomes sullen, querulent, and suspicious between her attacks, and is no longer able to restrain her coprolaliac impulses. These mental phenomena are so closely akin to those produced by other forms of auto-intoxication than that which occurs in epilepsy, and while clearly proving that accidental mental inter-complications of epilepsy may be conscious, they do not demonstrate consciousness in pure epileptic psychoses. Unconsciousness is not a necessary proof of epilepsy on the one hand, nor does a conscious psychosis disprove the epileptic nature of the subject in whom it occurs, on the other. In dealing with the question of consciousness, it should be remembered, moreover, that forgetfulness of events of a given period is

* Insanity.

† Neurological Review, 1886.

no evidence that consciousness has not been retained during that period. An overworked physician may be awakened from a sound slumber, may examine, prescribe, and record a given case, and return to rest, and be convinced of all this only by his casebook next morning.

All psychoses may occur in epileptics, and be tinged by the coexisting epileptic state. These, however, are not true epileptic psychoses, and need not necessarily present their characteristics. Melancholia, mania, acute confusional insanity, stuporous insanity, katatonia, paranoia, paretic dementia, secondary confusional insanity, may all complicate epilepsy.

TREATMENT OF INSANITY IN OTHER THAN PUBLIC ESTABLISHMENTS.

BY W. F. ROBINSON, M. D.,

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For the last few years the question as to whether the insane are best treated inside an asylum or out has been very much discussed. Some claim that the asylum itself has some wonderful curative power, and, therefore, as soon as a case of insanity declares itself it should be hurried off to an institution. On the other hand, certain authorities, notably Weir Mitchell of Philadelphia, declare that this is a mere supposition, and that cases are very much better treated outside of asylums than in.

These two statements offer the extremes of the question, and, like all similar statements, are neither of them true.

This is too large and complicated a subject to be covered by any such sweeping general assertions. One thing may be put down as true, with very few exceptions, and that is that the worst treatment of all for this class of cases is home treatment. The treatment in an institution, however poor, can hardly be worse for the patient than the treatment at home, and the advocates of the asylum are therefore right in urging immediate commitment to an institution, when this is the only alternative. In the vast majority of cases of insanity there are only these two alternatives, so that the case is practically settled.

To people of wealth there is another course open — the small private asylum. Patients in these private retreats undoubtedly get most excellent care amid quiet and agreeable surroundings. There is very little evidence to show that any very earnest effort is made to cure the cases. The patients in such retreats are generally members of wealthy families, who look upon them as hopelessly insane, and have very little idea what or how much is being done for their cure. Furthermore, many people have the strongest possible objection to sending acute cases to an asylum of any kind, either public or private. Take, for example, a family in which a daughter has been stricken with acute insanity, as a result of illness or of some emotional cause. If there is not a strong hereditary taint in the family the case stands a very good chance of being cured with proper treatment. Realizing this fact, the family are naturally very

much opposed to sending the patient to an asylum. They can't bear the thought of sending their loved one away from them, and they picture to themselves all the horrors of bedlam as it is sometimes portrayed in fiction.

As already stated, keeping these cases at home is the worst possible course to pursue, and would very probably end in making the patient permanently insane. What then is to be done?

In the writer's opinion, there is a form of treatment combining all the undoubted advantages of the asylum without any of its drawbacks. This method can not be applied, except in certain selected cases, a question which must be settled by a personal examination by the expert. When it can be applied, and all the requirements fulfilled, it certainly offers the very best chance for recovery. It requires, first and foremost, removal from home, which is an absolute necessity, the services of a specialist in mental diseases, and also those of a trained nurse. It is hard to give this method a name, but, if it must be done, it might be called the sanitarium method of treatment. It is a most arduous and exacting mode of treatment, and should never be undertaken except by an enthusiast in the work. There are certain advantages in having these patients in a first-class private sanitarium, but a good boarding house is almost as favorable for carrying out the treatment.

Just here a word may be said as to the actual mental condition of the insane. It must not be supposed that a person who has lost reason has lost it all. On the other hand, these patients are extremely rational in many ways. They not only think, but think a great deal. It is the will to direct and the judgment to control that is at fault. They have ideas enough, but the mind is so warped that they are not properly interpreted, and the deductions from them are, therefore, false. As a result of this, the patient very soon finds himself out of touch with those about him. Then he loses interest in what is going on among his friends and in the world at large. He becomes more and more shut up within himself, until finally he ceases to react at all to any of the stimuli of external life. A mind in this condition grows weaker and weaker, through lack of exercise, until the inevitable result—dementia or loss of mind—is reached. If in any way these unfortunates can be brought out of themselves and made to take an interest in something, they may be saved. As to the way to do this, more will be said further on.

Although they do not always show it, the insane have likes and

dislikes, just like sane people. They are often extremely sensitive to rude or unkind treatment, and, on the other hand, they are quite grateful for favors or kindnesses. Those who have the patience and tact to take advantage of these facts often obtain a great influence over the insane—an influence which may be made an important factor in their restoration to health. They often exhibit a desire to please, and will do a great deal for a person they like. On the other hand, many things which seem purely ugliness, they do without meaning any harm, or, perhaps, to revenge themselves on some person whose obstinate stupidity has goaded them to desperation. I have known several cases of patients striking attendants, when my only feeling was one of sorrow that they had not hit harder. Some of these unfortunates get the reputation of being violent, when the whole fault lies with those in whose care they are.

When given a task to perform, it is often pitiful to see how hard they will try to do it well, and this for no other reason than to please some one they like.

It is specially important, both for doctor and nurse, to win the confidence and gratitude of the better class of patients, since these are often the only levers that we have to work with. A poor patient may often be bribed with a pipeful of tobacco to do a piece of work, and thus give his mind the benefit of the occupation, and the additional advantage of working for a definite object. When treating patients who have ample means, this question of proper employment is sometimes quite a serious one.

Perhaps one of the worst things that can happen to anyone is to have no object in life. In the author's opinion, this very want of purpose is an important factor in the causation of much of the illness, mental and physical, from which so many young women of the present day suffer.

MENTAL TREATMENT.—It follows as a corollary, from what has gone before, that mental treatment is of great importance in these cases; indeed, the success or failure of the method depends upon it. The keynote of this treatment is as follows: Treat the patient as if he or she were sane. In other words, in your intercourse with them ignore the whole insane fabric entirely; when they utter their delusions, or talk nonsense of any kind, either ignore it or treat it as if it were sense. This method of treatment would be impossible for anyone to carry out who was not familiar with the insane. Patients may be reasoned with, but never about their delusions. With these few general remarks, which should serve

to show the outline of the method, we will pass to the details of the treatment.

CHEERFUL SURROUNDINGS.—The patient should have a pleasant, sunny room, with agreeable outlook from the windows; the lighter and prettier the furniture and pictures, the better. It is also a very good thing if the patient can be made to take an interest in it, and if he will choose any of the pictures or furniture, so much the better.

What has been said, and also what is to follow, may seem like mere trivial detail and unworthy of a place in a scientific method of treatment. In the treatment of mental diseases there are no details. Little matters which, in the treatment of ordinary diseases, would be hardly worth mentioning, may be of considerable importance in this connection. Indeed, the success of this method must be largely owing to proper attention being given to numerous small matters. The main object is to bring the disordered brain in touch with the outside world. In order to do this, every normal tendency, no matter how trivial, is to be sedulously encouraged and developed.

The love of music is one of the strongest sentiments in many natures, and on this account it is often a very powerful aid in the treatment. A patient may be so absorbed in herself that she will not speak or show the least interest in anything, and yet they can sometimes be made to play on some instrument. If they will do this it is not long before interest is awakened, and then they will go on and do better day by day. As in all other things, however, they exhibit all the weakness and vacillation of a child, and have to be led along the path of normal mental activity, just like an infant learning to walk. At first a patient will play a piece half through and then leave the piano. Do not be discouraged at this, but persuade them gently to go back and resume playing. If they will not, then let it go until another time. As a rule you will succeed, however, and they can be persuaded to finish the piece. This must go on day by day, encouraging, persuading, and gradually getting them to do more and more.

It will be noticed that they have great lack of perseverance, just like a child, and that they soon tire of things. When this is the case, do not insist too much, for the insane almost always have an obstinate streak in them, and are also easily irritated. Rather than irritate them, it is better to try some other form of occupation, and then perhaps later return to what has been already attempted.

Thus a patient who did beautiful work in embroidery, announced, after doing two pieces, that she was tired of it, and would not do any more. The subject was therefore dropped at the time, and her attention was drawn to other things. As sewing and embroidery are women's natural occupation, they are often important aids in the treatment of female patients. In this, as in all other things, it is necessary to take the patient's whims into consideration. The patient just spoken of, who embroidered so well, would let a rip in her dress go unmended for weeks unless she was actually driven to mend it. Another, perhaps, would not touch embroidery, but would become quite interested in plain sewing.

Another important phase of this question is clothes, in either sex. These patients are apt to be perfectly indifferent with regard to their clothes, and will wear the same suit or dress for months, no matter how shabby, torn, or soiled it is. If it is possible to get a patient interested in a new dress, it is often an excellent thing. The various important questions as to what the stuff shall be, who shall make it, and how it shall be trimmed, can hardly fail to reach a chord somewhere that will vibrate, and before one is aware of it, she is deeply interested. This expedient of having a new dress made is an excellent thing to fall back on, from time to time, in long-standing cases.

Another plan is to get the patient interested in cards, either to play with the nurse, or simple solitaire. There is a large variety of games, and a choice must be made according to circumstances. If the patient is already fond of some certain game, and has perhaps pleasant recollections connected with it, it should, by all means, be chosen. If, on the other hand, the patient has never played cards, or the mind is in a very feeble or apathetic state, then some very simple game had better be selected, as "old maid," or the even more childish game of "everlasting."

Still another form of occupation is found in trying to solve the different kinds of puzzles, those that are found in some of the periodicals, as well as others.

Apart from the question of occupation, the idea of actually accomplishing something is often an excellent stimulus to the mind. The old determination and will-power which the patient may have had in the past will, perhaps, be stirred up by this simple expedient, and so the good work will be helped along.

The main object of this article is to show the importance of mental treatment, but the writer does not wish to imply that other

methods should be neglected; the physical side in insanity requires attention as well as the mind. Among the various agents the author has found great assistance from electricity, and it is his custom to have the patient come to his office every morning for treatment.

This subject will not be pursued any farther in this article, as it might lead us too far.

The foregoing remarks serve to show, in general, the principles of this mode of treatment.

To recapitulate: It is a method which can only be applied in a limited class of cases. It is extremely exacting, both for the doctor and the attendants; so much so, that very few men would be willing to carry it out properly. If, however, all the conditions are fulfilled, and all parties concerned have the patience and perseverance to carry it out to the end, it offers prospects of cure far greater than any other method.

A CASE OF SUDDEN BLINDNESS AND SUDDEN RESTORATION OF SIGHT.

BY JOHN W. WAUGHOP, M. D.,
Superintendent of the Western Washington Hospital for the Insane.

The notes of the following interesting case were prepared by Dr. J. B. Loughary, second assistant physician:

Oliver Johnson, aged 44, weight, 110 pounds; nativity, Norway; occupation, cook. Admitted to the Western Washington Hospital for the Insane, January 5, 1895, by a commitment from Jefferson County. He is a widower with four children—the youngest, one year—all enjoying good health. His father died at the age of eighty-two, from old age. Mother died at the age of seventy-seven, from pneumonia. Ten brothers, three living and seven dead. Ages of the living, fifty-four, fifty-two, and forty-six; health good; one died at the age of thirty-three, lost at sea; one died at the age of one year, from diphtheria; two stillborn; one in infancy, and balance unknown. Two sisters living, ages forty-two and forty-nine; health good.

While in Russia, in 1866, suffered an attack of cholera. Was nine months in regaining his health; says he made a good recovery. Suffered from brain fever in 1868, confining him to the house for the greater part of five months; recovery good, so he says. Suffered a sunstroke in California, in 1877, remaining unconscious sixty days, during which time he was fed with a tube. Became insane November, 1877, and was committed to the Napa Hospital, where he remained nine months, when he made his escape and went to sea for two years. Was married in Oakland, Cal., in 1880, and soon thereafter returned to the sea for another year. Came to Port Townsend, Wash., in 1884, where he followed the restaurant business for six years. In the fall of 1888, while on a trip to the old country, by steamer, he dropped into a deep sleep or stupor, remaining unconscious for a number of hours; his pulse ran slow (less than fifty per minute), flesh cold and clammy, and to all appearances he was dead. The ship's physician attended him, but was unable to arouse him or to give the nature or cause of his trouble. After returning to consciousness he knew nothing of what had happened, and felt as if he had awakened from a natural sleep.

After returning to this country the following year, he suffered another attack, lasting three days. Dr. Lyall of Port Townsend

attended him and pronounced his condition a "trance." Following this, at irregular intervals, he suffered like attacks, lasting from a few hours to three days.

His wife died in June, 1894, from childbirth, complicated by pneumonia. For eighteen months previous to her death she suffered from some form of paralysis, requiring his entire attention, with consequent loss of sleep and loss of strength. The strain on his mind from the death of his wife and his weakened physical condition, threw him into a nervous prostration, which he claims is the cause of his losing his mind. During all of this time he suffered, at irregular intervals, the unconscious spells referred to above.

On November 11, 1894, he laid down for a nap and was awakened about one hour thereafter to find his eyesight entirely gone. Everything appeared black before his eyes. There was no pain, no dizziness, no paralysis of the muscles of the eye; pupils responded to light; no irritation or inflammation; to all appearances the eyes were perfectly healthy; were not examined with the ophthalmoscope. When he entered the hospital he weighed less than one hundred pounds, was very weak, thin in flesh, restless and sleepless, appetite poor, and bowels constipated. He soon improved in flesh, gaining thirteen pounds in six weeks; his sleep improved also, with a few doses of medicine. During the first three months he had some three or four spells of unconsciousness, lasting for about twelve hours. If he remained quiet, and was not disturbed, he would sleep them off and wake up as from a natural night's rest, but if disturbed in any way he would jump upon his feet and relate something about his wife, and perhaps strike out with his fist. When not in these spells his mind seemed clear and he would talk intelligently, and was a very pleasant man in every way. The only thing he complained of was occasional pain in the back part of his head; at other times in his eyes, as if in his eyeballs; these pains were severe at times. One peculiar feature was an increase in the sense of touch, so much so that he could tell the different coins and their value, and if given a deck of cards could tell each and every one of them by running his fingers over them. He was given iodide of potassium, in ten-grain doses, three times a day, but it disagreed with him and was dropped in four days. After this the sense of touch gradually disappeared, the iodide causing a tingling in his hands and fingers. After stopping the medicine for three weeks he began again and continued for ten days. About a week after dropping the iodide he noticed his sight changing slightly

from darkness to a milkiness, with an increase in the pain in the eyes and back of the head. This milkiness continued for about six weeks stationary, when he began again on iodide in twenty-grain doses, three times a day for nine days. Soon after this he noticed his eyesight getting better, but the pain continued. He could detect a bright light before his eyes, then he could see a match or dim candle. This condition remained for about eight or ten days, when, on March 25, 1895, while saying his prayers before retiring, he noticed his sight had suddenly returned, his pain had disappeared, and he was a happy man again. He had one of his spells a few hours before his sight returned and has not had one since (two months), the longest time he has gone without an attack since his stay in the hospital. He is now troubled with loss of appetite, loss of flesh, and of strength; pain and distress in region of stomach; bowels constipated, a great deal of gas on the stomach, and dizziness; the mind remains clear. He was blind just four months.

This is the first case of sudden blindness coming under my observation. It is also the first case of sudden recovery from blindness I have seen. In looking up the pathology involved it may not be amiss to recall briefly the organs of vision. First, the eyes, then the optic nerves, terminating in the commissure or optic chiasm. Then the optic tracts, beginning at the commissure and passing around the crura cerebri and terminating in the optic thalami, the corpora quadrigemina, and corpora geniculata. "From these three masses of gray matter new fibers start out which issue from the outer side of the optic thalamus, enter the internal capsule, and curve backward through the occipital lobe, lying on the outer side of the posterior horn of the lateral ventricle, and thus reach the occipital convolutions, ending chiefly in the cuneus." (Starr.) The termination of the fibers of the visual tract is called the visual area, and, as just stated, in man is limited to the convolutions of the occipital lobe.

Starr says: "The character of the blindness produced by the destruction of this cortical area is peculiar. It is termed bilateral homonymous hemianopsia—that is, a blindness in the like-named halves of both visual fields. When the right occipital lobe is affected the patient can not see any objects lying to the left side of the middle line as he looks forward. This peculiar form of blindness is easily understood by a consideration of the anatomy of the visual tract. * * * It is seen that each optic nerve divides

into two parts at the optic chiasm. The larger part crosses to the opposite optic tract; the smaller joins the optic tract of the same side. Each optic tract then contains fibers from both eyes. It is found that the fibers from the temporal half of the retina, which receives impulses from the nasal half of the visual field, do not decussate. Hence a lesion of the right optic tract will cause blindness in the nasal half of the visual field of the right eye. Fibers from the nasal half of the retina, which receives impulses from the temporal half of the visual field, do decussate with those of the opposite side. Hence a lesion of the right optic tract will cause blindness in the temporal half of the visual field of the left eye. Therefore a lesion of the right optic tract causes a loss of function in the right half of both retinas, and as a consequence the blindness is limited to the left half of both visual fields. Both eyes are affected; the blindness is bilateral; it is but one-half of the vision which is lost. The blindness is therefore called hemianopsia, and like-named halves of the two visual fields are blind, hence the term bilateral homonymous hemianopsia."

Lesion anywhere in the course of the visual tract, from the optic chiasm to the cuneus, will cause bilateral homonymous hemianopsia. If the lesion occur at the crus cerebri, there is apt to be hemiplegia of one side and oculo-motor paralysis of the other, combined with the hemianopsia. If at the thalamus, there will be a combination of hemianæsthesia, hemiplegia, and hemianopsia. But if in the occipital lobe or cortex, none of the other symptoms will be present.

The lesion in this case, then, may have been in the occipital lobe or cortex of both sides of the brain, making double hemianopsia.

Hirt says: "If in the region of the visual center or the optic radiation a bilateral focal lesion occurs, then we have complete blindness setting in with an apoplectiform attack. This is in reality a bilateral hemianopsia."

As this patient was subject to epileptiform attacks it seems probable that his disease was a double hemianopsia.

SUBSEQUENT HISTORY.

Confined to bed several months before death, which occurred November 12, 1895. Suffered severe pains in region of stomach, requiring large doses of opiates two or three times a day. Grew quite thin. No apparent enlargement or tenderness over stomach. No vomiting except from opiates. Mind remained clear up to within a short time of death. Post mortem, held twelve hours after death,

revealed a circumscribed abscess of base surrounding the tubercula quadrigemina, including the crura. There was also found carcinoma of the stomach in the pyloric portion, which was the immediate cause of death.

ON THE STUDY OF THE PALATE.*

BY DR. GEORGE BOODY,

Assistant Physician to the Hospital for the Insane, Independence, Iowa.

PHYSICIANS OF THIS ASSOCIATION: Whether or not the chimpanzee and orang-outang are imperfect or unfinished busts of man, which the sculptor Nature may, by chiseling off a little here and adding a part there during a cycle of time, change into perfect man, is of little consequence to us; but it is of paramount importance to us whether or not the changes in the physical make-up of man, which are so marked and take place so rapidly in this nineteenth century, and which many scientists look upon as stigmata of degeneration, bear any relation to insanity and what that relation is. We have met to-day to determine along what lines to carry investigation upon this subject and how to make it. It has fallen to the writer to attempt to sum up statistics on, and give some ideas as to, the method of examining the degenerate jaw. For the little he has seen and read upon this subject he is greatly indebted to Dr. Eugene S. Talbot, dental surgeon of Chicago, who, for a number of years, has spent much time in research and original investigation. The writer assisted him in taking measurements in a half-thousand cases among the insane. Since the investigation the writer has made and what he has seen is too limited to be of any considerable moment here, it will be necessary to quote from Dr. Eugene S. Talbot and others.

It has been said by Dr. Hammond that the coming man will be without hair and teeth, but the loss of the former is of little consequence, if the teeth and jaw can only be preserved. Even in this early period in the life of the Western races the hair is falling off at a much earlier age and more rapidly than formerly. The jaw, it is noticed by the most casual observers, is deformed and the teeth are subject to earlier decay and degeneracy. The eye and ear are not exempt, but are subject to the same law that governs the degeneration of the jaw and teeth and the losing of the hair. For ten years the indefatigable Dr. Talbot has called attention, in his papers read before medical and dental societies, to the fact that changes in the shape of the jaw of man were taking place and that the bones were diminishing in size, while in some there was excessive development. It is but recently that he has been enabled to bring proof sufficient

* Read before Association of Assistant Physicians of Hospitals for Insane, at Kalamazoo, Mich.

to warrant him in presenting his views to the public. Evolutionists and scientists had frequently noticed and mentioned the fact that changes were taking place, but they produced no data to prove the assertion. He and five other medical men, whose names are mentioned on page 11 in his "Study of the Degeneracy of the Jaw of the Human Race," took measurements of the skulls of the early races as well as of modern people from the skulls in museums and crypts of churches in Europe. In a great many of these they found the skulls classified so that it was quite easy to make the measurements. He and a score of dentists from every quarter of the globe, whose names are given in his "Study," took measurements of the jaws of living individuals of different countries and nationalities; the persons thus examined were from every walk of life. The width of each upper jaw was taken between a point on the outer surface of the first molar on one side to a point on the outer surface of the corresponding molar on the opposite side. These points were taken because these are the first of the permanent molars to develop. All the subjects were over twenty-five years of age. For the details in these examinations you are referred to his extensive and accurate tabulations, pages thirteen to twenty-three, in his work mentioned above. Dr. Talbot and others have noticed that there is a difference between the size of the jaws of the male and the female, as there is a difference in the size of the skeletons. This difference varies from .02 to .16 of an inch. It is also noticed in the measurements taken of the crania of the ancient races. There is also a difference in the lateral diameters of the jaws of different races. In the old countries it is greater than in this, the Athenians excepted. The jaws of the Indian races of this country are greater than those of the white races. There is also a difference between the diameters of the poor and the rich; and the purer the race the less the range of the diameters. In the Chinese the range is from 2 to 2.44 inches, one being 2.52 inches. Among the people of India it is 1.94 to 2.37 inches; the negro, 2.07 to 2.50 inches; the Marshpee Indians, 2 to 2.50 inches; in the mixed races it is from 1.50 to 2.75 inches, and a wider range is noticed here than among the pure races; Swedes range from 1.81 to 2.63; Irish, 1.88 to 2.50; English, 1.88 to 2.44; whites of America, 1.50 to 2.63. Thus it is noticed that the arrest of development of the jaw, and also excessive development, are most marked in the mixed races. The lateral diameter of the ancient Britons ranged from 2.12 to 2.50 inches, and in the present race it is 1.88 to 2.44, as noted above. The old Romans ranged from 2.12

to 2.62, and the present Italians from 1.94 to 2.69. The jaws of the uncivilized, it is seen, are larger than those of the civilized. The jaws of the Hottentots, the most inferior of races, except one, range from 2.12 to 2.37 inches. The Australians, the lowest in the scale, measure from 2.37 to 2.75 inches, lateral diameters. The Fiji Islanders and New Zealanders, the best developed of the races, either past or present, range from 2.50 to 2.75 inches, lateral diameter. The range of the ancient races, then, it is seen is from 2.12 to 2.62 inches, and the modern races from 2.12 to 2.87; three modern races have a minimum of 2.12 inches, while the minimum of all the ancient races, except the Anglo-Saxon, is 2.12. The maximum of the ancients is less than that of the modern races, hence the civilization possessed by them must have been of a higher degree than that of the modern. The lateral diameter is taken between the points mentioned above with a caliper compass having a graduated semi-circle at the base over which an indicator moves.

The antero-posterior diameter is taken by means of a double triangle formed by erecting a vertical a little more than three inches, upon which is the linear scale in inches and fractions of an inch, or millimeters, upon a horizontal piece a little more than two inches long. The horizontal piece is placed firmly against the posterior of the last molars on either side, while the vertical comes forward and rests upon the articulating surfaces of the upper incisors, and over the center of these is marked the number of inches or millimeters indicating the diameter. The range in this diameter is about the same as that in the lateral, in the same races. The female is from .02 to .24 inches. The depth of the arch or height of vault is taken by an instrument which is a complicated modification of the one used in getting the antero-posterior diameter, and it is taken from the alveolar border between the second bicuspid and the first permanent molar to the height of the arch. The average height was found to be .58 inches. The theory advanced by Dr. Talbot is that the more intelligent the race of people in a section of country the higher the arch. In the uncivilized races the jaw is found to be well developed, but the arch is low. He says the shape of the vault, like the shape of the cranium, does not indicate the intelligence of the individual; but he also says, "I think I am safe in the assertion that the high vault indicates a neurotic condition inherited from the parent." Now, if the high vault indicates a neurotic condition, then there are more neurotics than formerly, as shown by the tabulations already made, and there are more high vaults.

Now, the question is, does the degenerate jaw have any important relation to insanity, and if so, what relation to it does it bear? Is the percentage of degenerate jaws greater among the insane than among the sane? Are people with degenerate jaws more apt to become insane than those with perfect development of the jaws? To determine this, observations must be made, measurements taken and accurate tabulations procured. If the degenerate jaw tends to neurosis and insanity, we want to know it, and it is not enough to say, after a few cases have been observed, that such is the case; but results which can not be denied must be obtained by accurate observation of some thousands of patients, measurements taken, and all other points of interest noted. This ought to be done in many different hospitals throughout the country. This having been done, would it not be necessary to make measurements, or at least to observe closely, an equal number of sane people? To these questions your attention is called. You are invited to enter into discussion, that we may understand each other and determine how to do this and along what lines we shall proceed.

It has been proven that the foreign born, of whom there is a goodly percentage in many, if not all, of our hospitals, have perfect jaws, and hence, observation among them will result in nothing, since their jaws are almost universally well developed. Dr. Talbot says that the cause of insanity among them is due mainly to disappointment and hardships which meet them on coming to this country. Since this is the country of degenerate jaws, would it not be the right thing to observe and take measurements upon American born only?

I have already described the instruments used in measuring, and now I will exhibit them to you and take the measurements of a few cases. These are exact copies of the instruments used by Dr. Talbot, and he it was who, through his kindness, had these made and sent them to me.

Of the patients measured at Kankakee by Dr. Talbot, assisted by the writer, I have in my possession the measurements of 101 cases. Among these the greatest lateral diameter was $2\frac{1}{2}$ inches, and the least, $\frac{3}{4}$ of an inch; the highest vault was $\frac{3}{4}$ of an inch, and the lowest, $\frac{1}{4}$ of an inch. There were 15 V.'s, 18 partial V.'s, and 4 semi-V.'s; 11 saddle-shaped, 9 partial saddle-shaped and 10 semi-saddle-shaped; total, 66, thus making considerably more than half, nearly three-fourths, of the 101 with degenerate jaws, and the measurements were taken regardless of nationality or place of birth.

SOME CASES SHOWING POSSIBLE PHYSICAL SIGNS OF DEGENERATION.*

BY IRWIN H. NEFF,
Assistant Physician Eastern Michigan Asylum.

Morel, in his terse definition of degeneration, gives us a very good idea of what we understand to-day as pure degeneration. The definition, viz., a diseased deviation from the primary type, accurately expresses our knowledge.

The mental and physical signs of degenerative insanity are closely combined, and the student in studying one type finds it eminently necessary to correlate the mental and physical stigmata. The purpose of this paper is to give a few clinical histories illustrating physical signs of degenerative psychoses. Of the numerous physical symptoms, asymmetrical skulls and faces, deformities and malformations of the palate, and malformations of bodily organs have been accurately described. Recently cretinoid idiocy and certain forms of arrested mental development have received considerable attention, and it appears that our knowledge of degeneration, both in its mental and physical aspects, is gradually being more closely combined.

Physical diseases occurring with the family history of insanity often accompany the transmission of the insane taint, and may color the variety of insanity, or merely occur in connection with a characteristic type of mental disease.

The cases are taken somewhat at random, and owing to limitation of time are lacking in detail.

I am confident that in every asylum cases analogous, or at least with many points of similarity, exist.

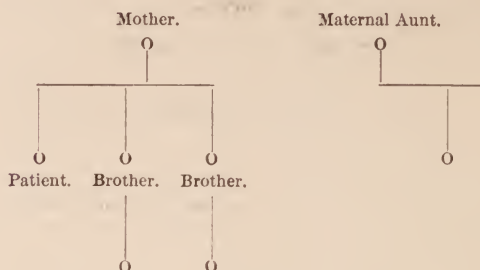
The cases presented, therefore, are merely to promote discussion and encourage a careful examination in those psychoses of a degenerative type.

CASE 1.—C. J., age 52; admitted E. M. A., 1894. Single; Canadian birth; nativity of parents, Canada; form of disease, paranoia; mother deaf. Two maternal great-uncles insane; one brother and sister insane; one brother peculiar; two brothers deaf; one child of each brother deaf; one maternal aunt deaf; one maternal cousin similarly affected.

* Read before Association of Assistant Physicians of Hospital for Insane at Kalamazoo, Mich., October 25, 1895.

Chart (Case 1) shows members of family with deafness.

CASE I.



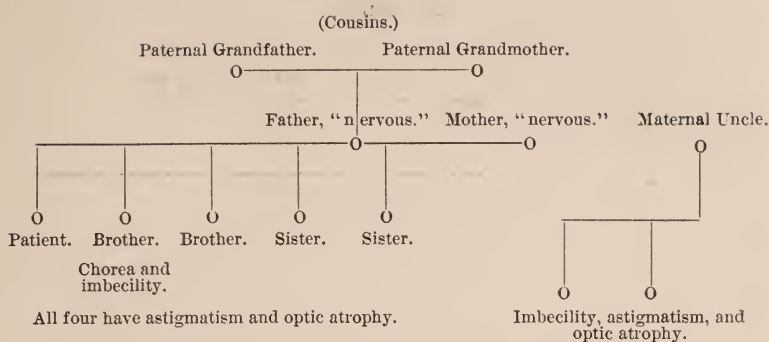
We have here deafness in three generations, comprising eight persons—the mother and maternal aunt in one generation, a cousin of the patient, the patient, and two of her brothers in the following generation. In the succeeding generation we have a child of each brother affected in the same manner. It is stated that in all these cases the onset of the deafness was between the ages of twenty-five and thirty-five, and in the majority of the cases the right ear was the first affected. Excepting this information I have been unable to ascertain anything else concerning these people. The patient alone has been examined. Age, 53; nativity, Canada; parents born in Canada.

Form of disease and hereditary history as above stated. An examination shows no physical abnormalities except deafness. This is bilateral, and disease of the external and middle ear is excluded. Bone conduction is absent in both ears.

CASE 2.—A. T., age 21. Admitted E. M. A., December 10, 1894. Single; native of Michigan; occupation, telephone operator; nativity of parents, New York; form of disease, melancholia. Patient had always been impetuous, impulsive, and difficult to manage. Two years before onset of mental disease acquired syphilis, followed by well-marked secondary symptoms.

Hereditary History: Paternal grandparents were cousins. The father was always regarded as nervous. One brother of patient has headaches, is considered feeble-minded, and has chorea. Another brother and two sisters have eye trouble and wear glasses. Two children of a maternal uncle are imbeciles and have extreme difficulty with eyesight. Two other cousins are weak-minded, and a number of cousins in the present generation have perverted vision.

CASE II.



Number of cousins in present generation have some difficulty with eyesight.

We have here quite a remarkable history: Grandparents were cousins, father nervous, and of his four children one had chorea with imbecility, and the remaining three, including patient, have some ocular difficulty. Two children of maternal uncle are imbeciles, and a number of cousins have what has been diagnosed as optic atrophy. Information obtained indirectly shows that most of these cases were astigmatized, and that in the cases of brother, sister, and cousins this was complicated with an optic atrophy. Examination of patient: Astigmatism pronounced. Ophthalmoscopic examination: *Right eye*—Choroidal degeneration to lower boundary of optic disc and above the macula; also indications of general choroiditis; pronounced optic neuritis. *Left eye*—Choroiditis and choroidal degeneration pronounced; optic neuritis present, but comparatively less intense.

CASE 3.—E. C., age 75; admitted to Michigan Asylum July, 1893.

Hereditary History: Thirteen members of her family, in four generations, have had hereditary ataxia. Paternal uncle died insane; brother and sister are insane. In all these cases the symptoms of mental trouble are characteristic of a dementia dependent on organic brain disease. Patient's difficulty in locomotion developed at the age of fifty-five, and was steadily progressive. At the age of seventy-five first mental signs were noticed. She was irritable, confused, and had delusions concerning her surroundings. These were persecutory in character, but not systematized. In reviewing the history of this family the following clinical summary can be made: 1st, occurrence of a form of ataxia in thirteen per-

sons in four generations of one family, with a distinct hereditary history. 2d, marked similarity of symptoms in those affected. 3d, the onset in all cases noted between the ages of fifty and sixty-five, with the exception of cases 8 and 12. 4th, the occurrence of insanity in four of the cases.

CASE 4.—S. S., age 36; native of Canada; married; admitted E. M. A., November, 1894. Six children, youngest eighteen months. Hereditary history negative. Form of insanity, melancholia. Cause, pregnancy. Delivered of two children April 29, 1890. Duration of pregnancy, nine months. Boy, weight 5-9; girl, 3-1. Both feeble and undeveloped. Boy had talipes equinus and died sixteen days after birth, of marasmus. Girl had suppression of urine and died eight days after birth. Post mortem showed cystic kidneys and imperforate ureters.

The above case is reported, thinking it might prove interesting as illustrating malformations of the fetus, which may develop in an insane woman while in a pregnant condition.

Cases 5, 6, and 7 are members of one generation of one family. The parents of these patients were own cousins. No other predisposition to insanity is known.

CASE 5.—A. S., age 34. Admitted E. M. A., June, 1888. Single. Native of Michigan. Form of disease, imbecility. Examination: Skull asymmetrical, bulging of left parietal eminence, giving a cranial index of 49. Palate long and narrow. Both ears deformed; helices thick and broad, lapping over and forming a large cul-de-sac; fossæ of helices deep above, becoming almost obliterated behind the antihelices. At this point the antihelices stand out very prominent. Fossæ are deep and abnormally large. Ridges across the conchæ are very marked and prolonged. External meatus is large. Lobules adherent. Feet are arched, not well developed. Heels are long and projecting. First two toes on each foot are long and of same length. Feet have appearance of being flat-footed.

CASE 6.—Brother of above. Age 35. Native of Michigan. Form of disease, imbecility. Examination: Asymmetrical skull, viz., abnormal depression in left parietal region. Measurements: Cranial index equals $46\frac{1}{2}$. Helices broad and overlapping, with adherent lobules, giving somewhat the appearance described in the preceding case. No deformity of palate. Deformity of thorax marked. Circumference under armpit, 38; under nipple, 34; length of thorax, $3\frac{1}{4}$ inches. Depth increased. Manubrium depressed.

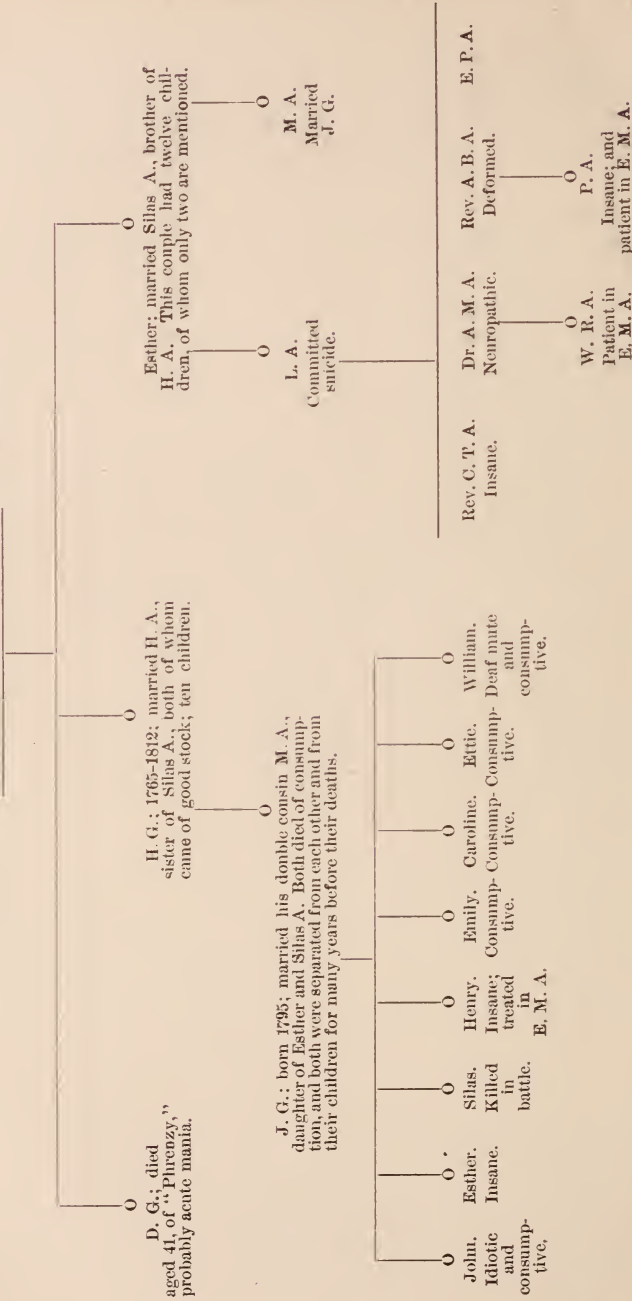
Abdomen protruded; greatest circumference, $39\frac{1}{4}$ inches. Marked angular curvature of spine in cervical and dorsal regions. Left shoulder lower than right and giving deformity to corresponding side of neck. The entire left side to lower margin of thorax is deformed. Ears show deformity corresponding to relative before described.

CASE 7.—E. A. S., age 29. Brother of above. Single. Native of Michigan. Diagnosis: Imbecility; head large, marked bulging in both parietal regions. Measurement of head: Cranial index, 47. Ears show deformity before described, viz., large, overlapping helices and adherent lobules. Left shoulder lower than right. Slight angular curvature in cervical and dorsal regions.

In these three cases we have apparently physical signs of degeneration. The ears in all these cases presented similar changes—departures from the normal structure, which warrant us in accepting it as a family type. The deformity of the feet in case 5, the marked deformity of the thorax in case 6, combined with angular curvature, is certainly suggestive of degeneration. It is also worthy of mention that the mental symptoms in each case showed the characteristics of imbecility.

In conclusion, I exhibit a chart showing both the mental and physical signs of degenerative insanity. This appears to me a remarkable history, demonstrating the evil results of consanguinity and the steady inheritance of mental and physical defects.

Henry G.; 1724-96; died of "dropsy." Married Rachel C.; 1730-94; died of consumption. Thirteen children, of which number the history of but three is known.



THE PRESENT STATUS OF INSANITY IN MASSACHUSETTS.

BY F. B. SANBORN, Concord, Mass.

By the last census (1895) Massachusetts had 2,500,000 inhabitants—having almost exactly doubled its population in thirty years—an average gain of $3\frac{1}{3}$ per cent a year. But in 1865 the registered insane of the State were less than 2,500, while thirty years later they exceeded 7,500; that is, they more than trebled while the general population was doubling. In October, 1895, the number remaining on the registers, after all recoveries, deaths, and removals, was nearly 7,000, while in 1865 it was less than 2,000. In this period of thirty years half a dozen new hospitals and asylums for the insane have been built, at a minimum cost of \$6,000,000, including enlargements of existing establishments, an average outlay of \$200,000 a year, which, in these later years, has risen to more than \$250,000. The annual cost of supporting our insane can not now be less than \$1,100,000, and is every year increasing. The number of judicial commitments of the insane in a year is about 2,200, of whom more than 1,500 are first commitments; the cases of recent insanity are about half of the whole number committed; the recoveries are a little more than 400, or 30 per cent of the recent cases under treatment; the deaths are about 550. Yet in spite of this removal from the lists by death and recovery of 1,000 persons, so great is the increase of new cases that the insane gain, in net numbers, at least 200 a year. When the Medfield Asylum, which is just now being opened for a few hundred chronic patients, shall be completed, in course of this year, this gain will be larger, for all the establishments are now crowded, and long have been.

Notwithstanding this crowded condition of the State hospitals and the asylums for the chronic insane at Worcester, Tewksbury, and Bridgewater, and the Austin Farm Asylum of Boston, all these establishments have improved their scale of treatment within the nine years since the newest State Hospital (at Westboro) was opened in December, 1886. The buildings have been improved, the medical staff increased in number and efficiency, training-schools for nurses have raised the standard of care in several hospitals, and much more attention than formerly is given to pathologic work and to the study of individual cases. Especially is this true

at the Danvers and Westboro hospitals, and the Tewksbury and Bridgewater asylums. The Worcester Hospital, which has no training-school, has a skilled pathologist, and several of the hospitals have boards of consulting physicians, as well as a governing board of trustees, on each of which are two women, and usually at least one physician. The private and corporate asylums (the largest of which is the McLean Asylum, now at Belmont, in fine new buildings) have also much improved in ten years, as well as increased in number, and in the number of their patients. The city and town asylums (generally detached buildings, making part of the almshouse plant) are more numerous and in better condition than in 1886, while the care of the few insane who remain in the ordinary small almshouse is no worse than then. The number of patients in families, under the Scotch system of boarding-out, has not increased as it should have done, the matter being somewhat neglected by the State Board of Lunacy and Charity. It will at once be seen what an opportunity Massachusetts affords for the best treatment and the scientific study of insanity. Its limited area, its minute, though irregular, classification of the patients in establishments larger and smaller, so that the advantage of treatment in masses or in small groups can be fairly tested — these, with the careful registration initiated by the late Dr. Earle and myself, sixteen years ago, give facilities such as hardly exist elsewhere in America, among a population so large, for settling some of the vexed questions which no one has yet definitely answered. Our law of commitment, passed in 1879, and slightly amended since then, has freed us from that plague of some States, vexatious suits for the discharge or false imprisonment of insane patients sent to asylums under medical certification alone. Before 1878 the custom here had been to use a loose form of commitment, based mainly on medical opinion not very specifically given, and bearing chiefly on the fact of insanity existing in the case. But two decisions of the higher courts, about that time, made a legal distinction between mere insanity and such a degree or form of it as would make asylum restraint necessary; and this distinction, coupled with the requirement of a judicial decree in all commitments, was sanctioned by law in 1879. Soon after, provision was made for a small class of voluntary admissions, and for the certification of cases arising in other establishments than those for the insane; and these additions to the commitment law, together with some care in examining the certificates of physicians, and the court orders, have given Massa-

chusetts a system which allows easy admission to hospitals and, at the same time, quiets the suspicions and defeats the intrigues of those who are inclined to call commitments in question.

It would be pleasant to think and to say that these facilities for the care and study and recovery of our insane are fully availed of by the authorities, but such is not the case. Most of our hospitals and asylums, both public and private, aim in that direction, and many of them are doing very good work. But the central authority (a board of State charities with full lunacy powers), which, ten years ago, led the way in suggesting and introducing improvements, has for some time past been rather a clog than an impetus to wholesome activity. It has failed to develop the system of family care, introduced from the example of Scotland and Belgium in 1885; it has involved itself in controversies with two of the hospitals (at Danvers and Westboro), and has shown no comprehensive grasp of the whole situation, hardly noting the force of its own statistical tabulations, and quite omitting to verify its statements by testimony. In consequence of this stagnation at the center of things, a movement has sprung up for the substitution of a special lunacy commission, to take the place of the existing board in all matters of insanity. Were it not for the awful example of the New York Lunacy Commission, which has stirred up so much strife and accomplished so little real good in that State, the Massachusetts movement, in which Dr. Edward Cowles is actively engaged, would be much more forward than it is. But the injustice done to several of our hospitals (as they declare) by the Central Board is strengthening the agitation. The question at issue between the State Board and the Westboro Homeopathic Hospital is mainly in regard to recoveries. Ever since this hospital was opened, late in 1886, it has reported a larger percentage of cures than the older establishments have lately done, but no larger than most hospitals used to report in the days before Dr. Earle had shown the instability of many of their reported recoveries. It is probable that the Westboro physicians, in the earlier period of their hospital, may have been over-sanguine in respect to permanent recovery, but of late years they have seemed to me as careful and authentic in this matter as their neighbors in the older hospitals. There is, however, one very good test of the comparative permanence of the recoveries made there and at Worcester, Taunton, etc. Every patient relapsing after recovery, and readmitted to the same hospital (as most are), is taken account of and reported each

year by every hospital; besides these, there may be, and sometimes are, relapsed patients from Westboro committed to Worcester, Danvers, etc., and *vice versa*. Now every one of these latter is entered on the registers of the State Board in Boston — from an examination of which it would be easy to determine, by a brief calculation, whether more recovered patients discharged from Westboro become insane again within five years than is the fact in respect to the recovered discharges elsewhere. As the State Board has never furnished these figures, it is fair to infer that it can not prove its charge or insinuation against the homeopathic hospital, which, for various reasons, has never had full justice done to it in the reports of the State Board. There are reasons, well known to me, which incline me to think that proportionately more patients *do* recover there than at the older hospitals, but it is a point so easily determined, as above indicated, that there is no excuse for leaving it to be a bone of contention.

The State Society of Homeopathic Medicine has lately taken up the points in controversy, and will soon publish its review of them. It lays stress on the fact that the tables reported by the five State hospitals at Danvers, Northampton, Taunton, Westboro, and Worcester, and summarized in the report of the State Board, show a greater proportion of recoveries, and fewer relapses after recovery, at Westboro than at the other four hospitals. Thus, while there were admitted at Westboro in the year, 254 cases (251 persons), of whom 63 were curable — and while 48 of the 63, and 67 in all, recovered during last year (the total of persons under care being 317), at the other four hospitals, with a total of 4,573 persons, and 1,491 admitted cases (of whom 458 seem to have been curable), 128 only of the curable recovered, and but 264 of the whole number. It would thus appear that, while three-fourths of the curable admissions of a single year recovered at Westboro, only between a fourth and a third of similar cases recovered at the other hospitals; also, that, of the whole number at Westboro, about one in twelve recovered in a year, while elsewhere only one in $17\frac{1}{3}$ recovered. Moreover, of the cases relapsing after recovery, many more are reported at the other hospitals than at Westboro. These figures will not, perhaps, be accepted as correct, but they point to a favorable condition which does seem to exist at Westboro, and not to the same extent in the other houses. At any rate, they may be taken as correct until corrected from the records.

Quite as important, and less under controversy, is the situation

as to the insane of the city of Boston. By the peculiar laws of pauper settlement, Boston, with a population of 500,000, has something more than one-fifth of all the insane of the State to provide for, mostly at the cost of the city. But Boston has only two small asylums, capable of containing in comfort less than 500 inmates, while she supports at present more than 1,200 insane persons. Consequently, she must distribute the rest among the eight hospitals and asylums that the State controls, each with its separate board of trustees. At the head of all the charitable and correctional institutions of Boston—including these 1,200 insane—is a single commissioner, who has about 5,000 prisoners, paupers, children, and insane persons constantly under his supervision. Of course, he can give but a morsel of his time to the insane—who are otherwise in no condition to be brought under a definite and comprehensive policy of classification and treatment—scattered as they are all over the State in separate establishments or in private families. It is, therefore, proposed, in a bill now before the Legislature, to give Boston's insane into the care of a special board of trustees, five men and two women, selected for their acquaintance with the difficult subject of insanity, permitting them to classify and provide for the 1,500 or more who annually get upon the registers of the city.

Such a change in the present system is not only called for on grounds of common sense and common humanity, but it would give Boston the opportunity to bring up the care of her dependent insane—for many years unsatisfactory—to the high standard which prevails in the State hospitals; to classify them properly for treatment and for study of their malady, and to do something for the scientific examination of the causes and prevention of this great evil—alienation of mind. At present, and for several years, Boston has neglected her opportunities in this direction, and the care of her insane, which should be in the purest hands, has been left too much to the personal and political influence of the party temporarily in control of the city government. The measure under consideration, while it leaves the detailed work of supervision to experienced superintendents, as now, imposes on the new trustees the duty of framing a policy and seeing it administered for the benefit of a mass of the insane greater in number than many States have to provide for. Such a policy would relieve the State establishments, and enable those to be carried on more usefully, while it would be of untold service to Boston.

DEFORMITY AND PARALYSIS OF THE UVULA AS A STIGMA OF DEGENERATION.

BY CHARLES L. DANA, M. D.,

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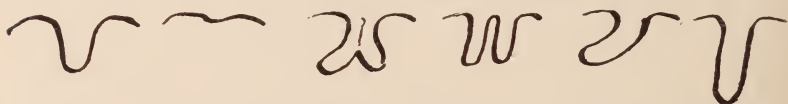
Abnormalities in development are often shown in the median line. Thus we find hairy growths on the back, twisting of the genital organs, cleft palate, torus palatinus, defects in the nasal bones, etc.

The uvula is an organ situated in the median line, composed of two muscles symmetrically arranged. It has no high functional significance, though it is not rudimentary. It assists in closing the naso-pharynx in deglutition and in directing the flow of secretion from the posterior nose to the throat.

I had noticed that a number of my patients had uvulæ sharply bent to the right or left. In a rather short period I met neuro-pathic patients who had double, rudimentary, very long or badly-shaped uvulæ. It seemed to me worth while to investigate the characters of the uvula in the degenerate classes, and it is the results of this work that I present here.

The uvula has various normal or accidental variations in shape. It may be very short, very long, very thick and large, or very narrow and slender. It is sometimes connected on the pillars of the fauces on each side by a membrane running the whole length of the organ (webbed). It may be curved over to one side, double or bifid (see figure). The commonly recognized deformities are the hypertrophic

VARIOUS SHAPES OF THE UVULA.



Normal.

Rudimentary.

Bifid.

Double.

Twisted.

Elongated.

and the bifid. Since hypertrophy may be often caused by local disease I did not class this with deformities in my statistics, and I only noted as deformed those much twisted to one side, or bifid, and supernumerary. Some uvulæ are very irregular in shape and may be considered asymmetrical, but these were not included in the deformed except in very marked instances. I found very great differences in the power of contracting the uvula, either voluntarily or reflexly, and, therefore, the innervation of the azygos muscles was also observed.

I have examined the uvula as to shape, size, and innervation in

108 insane.
60 neuropathic.
155 sane.

Total, 323

I should add here that I have been much helped in this inquiry by Dr. Russell, house physician to the Insane Pavilion of Bellevue Hospital, and by Dr. A. J. Brown and Dr. J. G. Brown of the house staff of the hospital. It may seem an easy thing to examine the uvula, but I found that to do it properly requires time and experience.

The Uvula in the Insane.—The total number of insane patients examined was 108; 40 female, 68 male. Among these the total number of deformities of all kinds was 53, or almost exactly 50 per cent.

The most common peculiarity was a twist to one side, this being about equally to right or left, but a little oftener to the left. The total number of twisted uvulæ was 32, or not quite one-third (31 per cent).

The proportion was much greater in the degenerative forms of insanity, being 19 among 35 cases, or over one-half, as against 13 in 69 cases of acquired insanity. Thus, just in proportion as the physical stigmata of degeneracy were *more marked did the proportion of deformed uvulæ increase.*

Hypertrophy and elongation of the uvula were not abnormally frequent, being 17 in the 108 cases, nor were they more common in the degenerative than in the non-degenerative types.

Bifid uvula was not found in any case. This quite agrees with a view which I hold, that cleft palate is not a stigma of degeneration, properly speaking, and implies no defect in nervous organization. It is merely an accidental disturbance in bony development. There are other so-called stigmata which should not be called such. Indeed, the time has come for a more critical study and classification of those hereditary or congenital defects so frequently and carelessly lumped together as stigmata of degeneration.

A curiously webbed uvula was seen in one case of general paresis. Dr. John N. Mackenzie has reported such a case in the Johns Hospital Reports, 1890.

As regards sex it was found that the proportion of twisted uvulæ in the men was 32 per cent; in women 29 per cent. Among the

degenerative insanities, however, deformed uvulæ were more frequent among women, being 8 in 14 women as against 11 in 25 men. As my cases run at Bellevue, degenerative insanities are more frequent among men; and this corresponds to the well-known fact that women vary less from the normal type and have a smaller percentage of degeneracy.

As regards *innervation* of the uvula, examination was made of fifty-one cases. The uvula contracted in twenty-four cases and was motionless in twenty-seven.

In normal persons the uvula is almost always innervated, contracting promptly when the patient says "Ah," or when the fauces are irritated.

Hence, a defective innervation of the uvula may be considered a mark of inferior or incomplete nervous development.

Examinations of the Uvula in Neuropathic Patients.—I have examined fifty-seven patients suffering from various forms of nervous disease, such as neurasthenia, hysteria, epilepsy, alcoholism, tabes dorsalis, spasmodic disorders, etc. Among them I found three bifid uvulæ (one imperfectly so), thirteen twisted, and one supernumerary.

The percentage of twisted uvulæ is, therefore, 22 per cent as against 31 per cent in the insane.

The Uvula in Normal Cases.—Dr. Mary Henessy was kind enough to examine nearly 100 throats of persons coming to the throat dispensary, and she gave me a negative report; the uvulæ were so monotonously regular that the investigation lacked interest. I have examined fifty-four persons not neurotic, and found one in eight (13 per cent) with abnormal uvula. The percentage in phthisis is larger. Indeed phthisical persons usually show a large proportion of degenerative stigmata.

The innervation was observed in a series of thirty normal persons (ten females, twenty males), and the muscles contracted in twenty-two cases (73 per cent, as against 47 per cent, in the insane). In five cases the uvula was much elongated.

Bifid uvula was found twice among the fifty-four cases. In one instance it was double, rather than bifid, the two parts being widely separated and each well innervated. The patient was a young woman suffering from a congenital heart lesion, causing *morbus ceruleus*.

The palate was examined for deformities, such as torus palatinus, gothic arch, etc., but notes were only made of the torus in

eighty-six cases of insanity. The total number of instances in which there was a decided torus was twenty-four, or 28 per cent. Here, also, the proportion was much greater in the degenerative types of insanity, being twelve in twenty-eight cases, or nearly one-half, while in the acquired forms there were twelve in fifty-eight cases. I should add here, that slight degrees of torus, and even the sharp, narrow torus, are of not much significance. It is the broad, long torus that is the real stigma.

Let me recapitulate here the results of my inquiry :

	Number Examined.	Per cent of Twisted Uvula.	Per cent of Non-innervated.	Per cent of Torus Palatinus.
Normal	154	13	27	15
Neuropathic.....	57	22	.....	20
Insane	108	31	53	22
“ acquired types.....	69	20	.....	.....
“ degenerative.....	39	54	.....	33

From this I believe I can safely conclude that the existence of a uvula twisted to one side and not innervated forms an anatomical and physiological stigma of degeneration. The twist or bend implies an unequal development of nerve supply of the two sides, and the degenerate uvula is, as one might *a priori* infer, one that has an unequal and defective nerve supply. Touch the throats of the degenerates and in more than half of them the azygos muscle makes no response.

NEW YORK, 50 W. 46th St., April 11, 1896.

ABSTRACTS AND EXTRACTS.

THE TREATMENT OF MYXŒDEMA BY THYROID EXTRACT.—At the last congress of French alienists and neurologists held in Bordeaux, in 1895, several new cases of myxœdema of the infantile type, which had been treated by thyroid extract, were presented. M. Bourneville presented three cases of myxœdematous idiocy occurring in patients of twenty-five, fifteen, and thirteen years respectively. All the cases presented the typical symptoms of the disease—lack of development, both mental and physical; dry, harsh skin; subcutaneous œdema, subnormal temperature, etc. The treatment in each case consisted in the administration of sheep's thyroid in doses of from half a lobe to a lobe of the gland, the frequency of dosage being varied according to the effect produced. The results were satisfactory in all cases. The patients lost weight, increased in height, and gained considerably in general intelligence. The improvement began with disappearance of the swelling about the eyelids, then followed general loss of flesh and slight elevation of temperature, the tongue decreased in volume, the nails took on a rapid growth, the crusts on the scalp disappeared, and desquamation of the skin of the hands and feet took place, these members returning to their normal condition, and the skin in general regaining a natural color. The movements of the patients became easier, and the bowels, which had been constipated previous to the administration of the thyroid, became loose. The intellectual improvement showed itself in greater expressiveness of the features as well as in loss of torpidity; the aptitude for mental work also increased.

The unpleasant symptoms noted were excessive sweating, feebleness, and trembling of the limbs, tachycardia, vomiting, and excitement.

M. Régis presented photographs of two similar cases of his own which had been greatly benefited. He laid great stress upon two points in connection with this form of treatment, on the fact that in certain subjects the thyroid extract produced very marked effects and should therefore be given at first with caution, and on the predominant action of the extract on the general nutrition of the body, and particularly on that of the teeth.

MM. Taty and Guérin reported two cases treated by the thyroid extract. In one, a case of myxœdema with marked mental symptoms, the physical condition was much improved by the medication, but the mental little, if at all. In the other case, one of imbecility following a meningo-encephalitis, the patient also having a goitre, the extract had but slight effect on the mental condition, but caused the entire disappearance of the goitre.

Comptes Rendus du Congrès des Médecins Aliénistes et Neurologistes de France. Bordeaux, 1895.

THE INCREASE OF INSANITY.—Dr. Tigges, at the session of the Medical Society of Dusseldorf (rep. in *Deutsche Med. Wchnschr.*, February 20th), discussed the question of the frequency and increase of insanity of late years. According to Peretti, there were in the Rhine province asylums in

January, 1875, 2,473 inmates. These figures increased gradually till in October, 1893, the number was 7,222. The asylums of the religious orders had the largest proportion (2,813); next came the provincial asylums (2,554). There were annually about 1,400 admissions to the provincial asylums, which is about three to each 10,000 of the population. According to Rahl, there were, January 1, 1885, 42,669 insane in the asylums of the German Empire, besides 1,234 in general hospitals, making a proportion 9.4 to 10,000 in asylums. According to the census of the insane in 1880, in Prussia there were twenty-five insane to each 10,000 inhabitants. Corbet states that in 1893 that the statistics of the British islands show an increase, and Sanborn gives the same report for America. According to Hack Tuke there were in the English and Welsh asylums, from 1871-75, twenty-five insane cared for for every 10,000 of the population, and in 1888 twenty-nine. He explains this disproportionate increase, not by a greater tendency to insanity amongst the people, but by reduced mortality, the chronicity of the disorder, and the tendency to relapse. Between 1871 and 1875 the asylums received annually an average of 4.3 admissions to each 10,000 of population; between 1888 and 1892 an average of 4.9. This indicates not so much an increased tendency to mental disease as a better appreciation of the asylums and a larger proportion of cases transferred from workhouses, adding to the incurable contingent in the asylums. The increase of insanity is in the poorer classes and amongst those past middle age.

The alleged increase of insanity in Ireland has been thoroughly discussed by Draper and Tuke; while elsewhere the increase of insanity occurs with an increase of the general population, the reverse of this is met with in Ireland. The census of 1871 gave for Ireland 34 insane to each 10,000; that of 1891, 45.6, and in England, 33.5. Further, from 1868 to 1872 the first admissions were for England 4.07, and for Ireland 3.95, while between 1888 and 1892 they were respectively 4.89 and 5.23. These last figures, however, need a correction, as the transfers from workhouses are included in Ireland and not in England. Subtracting those for Ireland we have 4.59 admissions, less than in England. In late years the average age has increased and the mortality in Ireland is less than in England (7.8 to 10.2 per cent). From these facts one can deduce that the predisposition to insanity is about the same in both countries, and the Irish excess is due to greater congregating of chronic cases and lesser mortality. Draper, nevertheless, admits a certain actual increase, as does also Hack Tuke, for certain districts. The careful study of statistics shows no real increase of new cases in England, and only a slight one in Ireland, and it is probable that with sufficient data the same state of things would be found to exist also in Germany.

W. J. CORBET, *Fortnightly Review*, March, 1896, takes the opposite view to the above, holding that the increase is real and not apparent merely, and attributing it largely to heredity—the propagation of the insane. Next to heredity he ranks alcohol and vice as causes.

KATATONIA.—Kraepelin (Versamml. des Sudwestl. Deutschen Psych. Vereins in Karlsruhe, 9 Nov., 1895; *Allg. Ztsch. f. Psych.*, LII, vi, p. 1126) recognizes katatonia as a definite morbid type, and has studied it with a view to

ascertaining its actual prognosis and course. In sixty-three well marked cases, females predominating, there were twenty-four that had remissions; fourteen of these relapsed; for the others the time was yet too short to say what the outcome would be. Twice two relapses and once four were observed. During the remissions there was only in one case a claim by the friends of complete mental health. The relapses generally occurred within five years, occasionally longer; the mental weakness was more marked each time. The disorder resembled in this paresis, with which it is otherwise also comparable, and its general tendency seems to be toward dementia. Kraepelin sums up his conclusions as follows:

"1. Remissions are common in katatonia, especially in the male sex; their duration may be for years, even over ten years.

"2. During the remission the mental restoration is not complete; some peculiarities (constrained, emotional, or especially quiet disposition, irritability) still remain.

"3. An individual that has been once affected with katatonia has a great chance of sooner or later a relapse.

"4. We have in katatonia to deal with an organic cerebral disorder, tending to a more or less pronouncedly serious condition of dementia."

APHASIA IN POLYGLOTS.—Pitres, *Revue de Med.*, Nov. 10, 1895 (abstr. in *Gaz. Hebd.*, Feb. 9), reports seven cases of aphasia in persons speaking several languages, the last of which is one of especial interest. It was a man acquainted with French, the Gascon patois, English, Spanish, Italian, and Arabic. Ictus apoplecticus, right hemiplegia, and total loss of speech. Speech returned gradually; in two months comprehension of words began to appear, and later the articulation of French, his native tongue. Four months later he suddenly regained the understanding of the patois, but was still unable to understand the other languages. In the succeeding three months he began to comprehend first isolated words, then common phrases, and finally the greater part of his colloquial Spanish and Italian, and could even talk a little in the two languages. Progress in English was much slower and more limited, and that in Arabic was *nil*.

As regards this systematic disappearance of the aphasic symptoms, M. Pitres says:

"1. When a polyglot individual becomes aphasic he does not necessarily lose alike and to the same extent all the languages he knew before. Most frequently the aphasia, at first general, gradually disappears, the patient first begins to understand, then to speak his most familiar tongue, and later comes to comprehend and then to speak the others with which he was acquainted.

"2. This systematic regaining of languages occurs in cases where the speech centers, confused but not destroyed by the cerebral lesions causing the aphasia, retake progressively their lost functional activity.

"3. The temporary inertia of the cortical centers of language explains rather sufficiently the seriation of the observed phenomena in polyglot aphasia, so as to render it unnecessary to invoke the absolutely hypothetical existence of special centers for each of the languages successively taken up by the patient."

THE VALUE OF THE KNEE REFLEX IN DIAGNOSIS AND PROGNOSIS.—Cramer, *Muenchener Med. Wchnschr.*, No. 47, November, 1895 (abst. in *Gaz. Hebdomadaire*, February 16th). Conclusions: Among mental diseases, paresis alone gives definite figures in this respect. In a rather large number of cases of the patients with symptoms of cerebral excitement there is an exaggeration of the reflexes. Abolition of the knee-jerk in insanity, when not alcoholic or connected with marked serious disorder of the nervous system, should suggest paresis and an unfavorable prognosis. If acute mania during convalescence, chronic mania, and certain acute types of paranoia are accompanied with loss of the patellar reflex, the prognosis should be reserved. Exaggeration of the reflex in idiots or individuals, showing progressive mental failure, and who also have the Argyie-Robertson pupil and speech disturbances, indicates an unfavorable prognosis. The importance of the exaggeration of the reflexes is considerable in the diagnosis between mania and the analogous state of acute paranoia. In the course of chronic paranoia, an increase of the knee-jerk associated with other symptoms presages a new attack or an exacerbation. The cases of paresis with Westphal's sign appear to indicate that the disorder has been of long duration and of depressive character. The abolition of the patellar reflex after an epileptic attack should exclude simulation.

INFLUENCE OF THE BRAIN ON NITROGENOUS TISSUE CHANGE.—E. Belmondo, *Rivista di Patologia Nervosa e Mentale*, I 2, February, 1896, publishes the results of an experimental study on decerebrated pigeons to test the effect of the nervous system on nitrogenous exchange, from which he deduces the following:

As conclusions from this research it seems to me we may affirm that the cerebral hemispheres have, at least in birds, an evident notable importance as regulators of tissue change, more particularly in the way of inciting tissue renovation.

There is need, however, of many reservations in the assumption that the diminished nitrogenous exchanges depend on the abolition of the psychic reflexes from the fact that there is no longer a psychic organ.

On the contrary we have not thus far demonstrated that psychic phenomena are accompanied by an increase or by any sensible modification whatever in the metabolic processes of the organism. From my experiments the only result proven is the notable influence of the brain as a trophic organ for the tissues.

ACUTE DELIRIUM.—Dr. Clemente Cabetta (Genoa), *Rivista di Patologia Nervosa e Mentale*, I 2, has examined the blood in five cases of acute delirium, to find the bacillus discovered by Bianchi, to which the latter attributes this disorder. In all cases the results were negative except in one where, in cultures from the liver and spleen, he found, after twenty-four hours, a bacillus, differing, however, from that of Bianchi in its developmental characters. At the same time the cultures from the cortex and basal ganglia of this patient showed staphylococcus pyogenes albus, and those of the subdural and ventricular fluid and of the blood gave only negative results.

The clinical features of all these cases were typical, and he therefore concludes that in some cases, clinically corresponding to the form called by Bianchi *delirio acuta bacillare*, there are no positive findings in the bacteriological examination of the blood.

The communication is merely a preliminary note—the research is to be continued.

THE SURGICAL TREATMENT OF EPILEPSY.—Dr. E. G. Mason, *Medical News*, March 21st, discusses the effects of trephining for epilepsy, and publishes a table of twenty-six cases, which, with those previously published by him in Dercum's "Nervous Diseases," makes a total of seventy cases taken from contemporary medical literature. Of this total, he finds three cures and six cases improved, a still larger proportion, however, showing more or less temporary improvement. Of the twenty-six here tabulated, only one was a cure, a child of twelve years, in whom the epilepsy was probably not yet a fixed habit of the nervous centers.

Dr. Mason's paper recognizes the fact that there has been too much claimed as results of the operative treatment of epilepsy; that the percentage of cures is not a large one; but he believes that the reaction has gone too far, and that the surgical treatment of epilepsy has still an important future, with better care in selection of cases suitable for operation. His statistics also seem to show that the mortality of trephining is not altogether insignificant, its percentage, 4.3, being equal to that of the cures.

CONSCIOUSNESS IN EPILEPSY.—The following are the conclusions of a paper by Prof. E. Siemerling on "The Transitory Disturbances of Consciousness in Epileptics in their Forensic Relations," *Berliner Klin Wochenschr.*, Nos. 42 and 43, 1895:

1. In the epileptic psychoses a dream-like, altered condition of consciousness is probable, and not by any means a total or partial amnesia.
2. The most various transition forms occur between the different forms of so-called acute and chronic epileptic psychoses. Epileptic or epileptoid conditions and psychoses must alike be reckoned as symptoms of cerebral disease.
3. The transitory, dreamy states are characterized by the rapidly recurring, apparently orderly, indifferent, and inconspicuous manifestations, and by unusual, unexpected, often violent, acts.
4. There is no epileptic psychosis without epileptic or epileptoid antecedents. Epileptoid conditions are more frequent than is commonly supposed, especially vertiginous attacks.
5. With the lack of epileptic or epileptoid manifestations, all other symptoms, such as amnesia, similarity of the attacks, peculiarities of actions, sensory hallucinations, will serve to make the diagnosis of epilepsy most probable.

THE CASTRATION OF CRIMINALS.—Every little while there appears in the medical press from Maine, Texas, or somewhere between, the proposition to castrate certain classes of criminals, with more or less weighty arguments

in its favor. Two of the latest of these, by Dr. F. E. Daniel and Dr. H. C. Wey, were read, January 11th, before the Chicago Medico-Legal Society, and discussed by other criminologists of eminence. The general consensus of opinion seemed to be against the practice on prudential grounds, the unsex-ing of an individual being too serious a matter to be lightly undertaken, even in a criminal. Dr. Daniel's paper was strongly in favor of it, more especially in cases of criminals guilty of sexual crimes. Dr. Wey discussed its propriety in sexually morbid prisoners, and more especially its medico-legal bearings and consequences. He limited himself to pointing out its possible legal dangers without positively committing himself as to its actual disadvantages or advantages.

The two laymen who took part in the discussion, Messrs. Mat W. Pinkerton and W. S. Elliott, strongly opposed the operation, mainly on humanitarian grounds. Mr. Elliott, however, claimed that, as a penalty, it could not be legal; it would unquestionably fall under the constitutional prohibition of cruel and unusual punishments, but the main objections in his argument were the sentimental ones.

The subject is also discussed editorially in the *Medical News* of January 25th, in connection with similar operations for purely medical purposes. It offers the argument for the castration of criminals in the following, which states one side of the case quite fully:

"We now come to an aspect of the subject which will doubtless excite opposition, and may seem inconsistent with the spirit of the remarks which precede. It is not the first time that it has been broached by us or by others. It is a subject which must come up for agitation, as a matter of scientific and economic importance, and will be settled *pro* or *con*, we believe, in the near future.

"It concerns the sterilization of the irreclaimably bad in the community, both males and females, for the protection of the community, by removing at least one potent source of supply. It is idle for any one to claim, in these times, that heredity does not exert a most powerful influence upon the physical, moral, and intellectual development. Men or women with bad characteristics will breed their like. Thieves, harlots, and drunkards consort together, for they have similar tastes. Add to heredity the vicious environment to which the children of such parentage are subjected, and we can hardly fail to have criminal traits and tendencies continued and intensified. The well-known statistics which were compiled a few years ago, and which traced the history of a woman of vicious propensities, who finally brought up in an almshouse, showed in the children and grandchildren, many in number, and invariably (we believe) criminal in tendency, what an enormous load society takes upon itself in allowing such depraved beings to reproduce their kind indefinitely. Communities offer bounties for the destruction of noxious beasts and vermin, and yet offer no resistance to the reproduction of elements far more dangerous than these. From the humanitarian standpoint such sterilization is robbed of objections which, a few years ago, could have been urged against it, for it can be done painlessly and with almost no danger to life.

"Naturally it would have greater terrors to men than to women, especially

to young men, by whom the greater number of crimes are committed. It should be applicable only to incorrigible offenders; that is, to those who have been sentenced to prison two or three times for serious crime, or to those who are guilty of crimes which are particularly revolting and shameful. It would probably act as a deterrent to the commission of many crimes, not alone from the sense of personal loss and defect involved, but from the disgrace which would attach to it and the exposure to ridicule.

"It would certainly be offered as a substitute for lynching in those parts of the country where rape and similar deeds of violence are said to abound, and might tend not only to diminish the number of such lawless procedures, but also tend to diminish the crimes which evoke lynching, the latter being manifestly a failure in that respect.

"Of course, the scope of this article would prevent us from going into the details appertaining to the suggestions which have been made.

"The matter must be treated as any other pathological-sociological subject would be treated, and discussed from its scientific as well as from its sentimental bearings."

ON THE RELATION OF SEX TO THE PROGNOSIS IN EPILEPSY.—William Browning (*Am. Med. Jour.*, December 14, 1895), *Am. Medico-Surg. Bulletin*: The author's experience with the two sexes in the treatment of epilepsy is stated as follows: In early epilepsy in the male, where there has been no organic change, there are considerable, perhaps even, chances of cure in the more favorable cases. In the less favorable cases, however, there is correspondingly less hope of cure.

In the female, on the contrary, the outlook, as presented by the author, presents a long line of failures. In attempting to account for this, attention is called to the fact that intoxication habits in general are less tractable in women than in men, and that the number of females in schools for feeble-minded who are capable of any real instruction is much below the males.

These matters, though hard to analyze closely, probably have a bearing on the main point raised. In this line the author considers the following suggestions:

(a) The suggestion of a greater strain placed upon the females at the age of puberty (Hare) hardly calls for serious consideration. If such an element exists it would tend rather to produce an excess of epileptics in that sex than to any essential difference in the resulting disease itself.

(b) The influence of a possible hysterical factor is better worth attention. The author has often experienced some difficulty in determining whether or not it did exist in some female epileptics; while in the male, on the contrary, he has found epilepsy and hysterical epilepsy sharply separated.

(c) The power of habit in the female is greater than in the male.

(d) Finally, it is possible that failure of treatment in the female epileptic depends on some inherent fundamental condition, and that we can never expect to make it so successful as in the male. While there is a fair chance of cure in the most favorable male cases, we must expect little in the female, and remember it in prognosis.

GYNECOLOGY IN THE INSANE.—Dr. Alfred T. Hobbs of the London (Ont.) Asylum writes in the *American Medico-Surg. Bulletin* of March 28th in favor of more active gynecological treatment of insane women. He briefly mentions nineteen cases. Nine of these were minor operations on the uterus, curettage, divulsion, trachelorrhaphy, and amputations of cervix. In all these cases he reports a physical improvement, 6 per cent were discharged recovered, and two as improved, and in only one was there no mental improvement. These results are the more remarkable since four of the nine were cases of "chronic mania" of two, three, five, and fourteen years' duration, respectively, and the one of three years' duration was the one exception to the general betterment after the operation. These results in these chronic cases are almost too successful.

In the remaining ten cases there were two of Alexander's operation. One of these, a puerperal case of two years' standing, improved; the other, an acute case, died three or four months later from maniacal exhaustion. The operation of hysterectomy for periadenitis gave in one chronic case relief, and in an acute case was followed by recovery. In another chronic case with procidentia, Freund's operation improved the general condition. In three cases of coeliotomy there were two deaths and one recovery, with mental improvement. Removal of an ovarian cyst per vaginam in an acute case was succeeded by marked physical and mental improvement, and physical amelioration only followed operations for torn perineum and hemorrhoids.

The inference is that these are the total of gynecological operations in a year, though the author does not so expressly state. If equally good results could be obtained generally, especially in chronic cases, it would be well to make gynecological surgery a leading therapeutic method in all our hospitals for the insane.

THE ACTION OF POISONS ON THE NERVE CELLS.—Dr. H. J. Berkley, *New York Med. Record*, March 7th, discusses the later literature of this subject and reports the results of experiments by himself on the effects of ricin on the nerve cells of guinea-pigs and rabbits' brains, as revealed by the silver phosphomolybdate stain. The article is accompanied by several photo-micrographic illustrations, giving the appearances as shown by this method. The poison seems to first affect the finer stems or processes, producing tumefactions, without producing changes in the axons or in the neuroglia. Later, after longer continued action of the poison, the neuron is reduced to the principal apical dendrite, and finally this also becomes a mere stump, and mainly composed of a few large, irregular tumefactions, the gemmules having entirely disappeared. The nerve fibers themselves are not affected, but the neuroglia elements that are visible, the mossy vascular cells are swollen, and the extensions are thicker and more nodular than normal. The changes in the cerebellar cortex are similar to those in the cerebral.

Cortical examinations were made on the brains of healthy animals for comparison and confirmation of these findings. Dr. Berkley concludes that they show "very absolute and positive lesions of the nerve cell induced by the action of a soluble poison in the limited space of a few hours and in a manner

very similar to that in which we should imagine large quantities of a toxalbumen would act when it is engendered in the course of certain diseases of bacterial origin.

ACCIDENT NEUROSES.—A recent editorial in the *Boston Medical and Surgical Journal* discusses a contribution of Prof. Adolf Struempell in a late issue of the *Muenchener Med. Wochenschrift* (3d and 10th December, 1895) on the subject of the results of traumatic shock, the much disputed so-called traumatic neuroses. It calls attention to the importance of these in a sociological point of view, the moral effect upon the community, and especially the working classes, of the more or less indiscriminate bestowal of damages, as in a measure perhaps more important than the purely medical side of the question. It is this last, however, that we have to do with here, and the conclusions of Professor Struempell carry considerable authority. He treats these symptoms mainly as a psychosis, a manifestation of hysteria, or hypochondria, or neurasthenia, and dwells upon the importance of treating it as such. The special diagnostic points, the anæsthesias, limitations of the visual field, etc., have had their importance overestimated, as has also the question of simulation, which may not exist in any conscious or responsible way, even when the physical symptoms are exclusively due to the mental state. Still he does not absolutely exclude all actual organic disease in these conditions, though he holds its occurrence must be rare. The occasional cases of actual mortality without obvious lesions certainly indicate this, and the newer methods of investigation into the finer anatomy of the nerve elements may yet prove that there is more often a material organic basis than he admits. The following are his conclusions, as given by the *Journal*:

“1. The name ‘traumatic neurosis,’ in its common acceptance, should no longer be used as the expression for a definite and special disease.

“2. It is probable that a true ‘traumatic neurosis’ exists in the sense of a chronic organic change resulting from a severe commotio cerebri or commotio spinalis. Such cases are, however, rare.

“3. The so-called objective symptoms of accident neuroses do not properly deserve the name. All such symptoms are dependent upon the psychical state of the patient.

“4. The distinction between simulation, purposive exaggeration, and a true neurosis is easy theoretically. Practically the difficulties in diagnosis are often great. The changing character of certain symptoms does not necessarily imply simulation.

“5. It is of the utmost practical importance, whenever possible, to prevent the onset of the neurosis. Palliation has a much more brilliant outcome than treatment when the condition is established.

“6. In all cases it is the duty of the physician to bring it about that the patient shall again gradually accustom himself to work.”

The third conclusion is, perhaps, a little too positive, except as referring only to the hysterical anæsthesias, etc. There must be in cases such as are admitted as probable in the second, some actual objective symptoms.

GEOPHAGOMANIA.—A. Bernstein, *Meditzinskoe Obosrenje*, Nov. 15, 1895 (*St. Petersburg-Med. Wchnschr.*, No. 46, 1895), reports a case of a woman who,

after an attack of acute mania, was taken with an uncontrollable impulse to eat dirt. At first the smell of moist earth sufficed her, but soon she took to eating it by the handful, and any interference with this appetite made her violent, while she was perfectly quiet if she was allowed to satisfy it. Gradually she came to refuse all food but milk, in which she would mix earth, and became naturally exceedingly reduced and emaciated. Partial improvement followed treatment in the psychiatric clinic. Bernstein considers the case one of a special type of hysteria, not to be confused with the tropical *cachexia Africana* in which dirt-eating is a symptom of a serious underlying neurosis of nutrition.

THE REMISSIONS OF GENERAL PARESIS. — Steele (*Med. Rec.*, 1895, 48, No. 24), *Am. Med. Surg. Bulletin*, March 9th. The remissions of this disease rarely occur in any but the early cases, which leads us to infer that the primary change is more in the line of a functional one, affecting the nutrition. Opportunities for observations on autopsy in early cases are quite rare. In a case reported by Berkeley, which was probably one of Mickle's "galloping cases," the disease had existed but nine months. There was marked vascular change, degeneration of the blood-vessel walls and a disturbance of the lymph current. The assumption was that the degeneration of the neurons was consequent upon a disturbed cellular metabolism.

The interesting point of this case was the great change in nervous structure after so short a duration of the disease.

The remissions of the early period are generally less noticed, because the physician is rarely consulted in the beginning. If he is, it often appears as a neurasthenia or other mild nervous disorder. It is fair to presume, at least theoretically, that if the diagnosis can be established at a very early period, before a destructive change occurs in the neuron itself, the remission, by proper treatment, may be led to permanent recovery. Special emphasis is to be placed upon the fact that alcoholic insanity or pseudoparesis, in their improvement, should not be confounded with the remissions of true paresis, spoken of in this paper.

Seven cases occurred under the writer's observation at the Utica State Hospital, in which there were marked remissions, varying in length from a few months to years, showing different degrees of improvement from a feeble-mindedness to nearly complete restoration of mental vigor. The first case had a remission of two months, and seemed to gain mental and physical tone, but finally succumbed to apoplectiform convulsions. The second case, although possessed of a strong hereditary, alcoholic, and Keeley-cure history, had a remission of a year, but finally succumbed to paretic convulsions. In the third case, after paresis had become well marked even to the point of convulsions, the patient regained fairly good mental health and remained in this condition for three years, but finally died in paretic convulsions. The fourth case had a remission of nearly one year. The fifth case had several remissions, and after paresis was very well marked, one remission lasted for over two years, but finally the patient died in a convulsion. The sixth case had a remission for one year, after developing grandiose ideas and physical signs of paresis. The seventh case remained well and was employed as a

clerk for one year, after a stay at the hospital of several months, during which time he presented all the typical symptoms of paresis. Through the influence of business reverses, he became again afflicted, and returned to the hospital, and is once more typically paretic.

The reviewer is aware that in some of our largest asylums for insane, where many cases of paresis come under observation yearly, the books, on close examination, show many paretics admitted for the second time, in which the diagnosis was written in ink over lead-pencil marks of "acute mel." and "acute mania."

In these instances it seems that the first diagnosis was incorrect, and that the patient had been suffering from paresis from the first, and that his discharge marked only a decided remission from the disease.

SCUTELLARIA IN BRAIN DISEASE.—Scullcap is a nervous sedative, pure and simple, a wet cloth upon a fiery brain, and in many instances it is morphine, sulphonal, bromide, and chloral, all in one. It creates no habit and is apparently harmless. It is of little use to relieve severe pain. In the treatment of delirium tremens (*Med. Age*) scullcap is invaluable, and has the remarkable effect of calming fear. When brain disease exists or is to be feared, or in insanity, give it with cannabis indica. When possible to obtain, use the fresh herb, gathered in the woods and meadows, from which make a decoction, giving from one-half to one drachm, in very hot water, an hour or two before bedtime, and repeating once or twice, with an hour interval, if necessary. In chronic cases it may be given frequently during the day. When the herb can not be obtained, use the green fluid extract only.—*Ex.*

THE CONNECTIONS OF THE CEREBELLUM AND THE CEREBRUM.—Mirto, *Rivista di Patologia Nervosa e Mentale*, February, 1896, in an article discussing the finer anatomy of the peduncular and subthalamie regions in man, deduces the following as to the cerebello-cerebral tracts:

Between the cerebrum (cortex and sub-cortical nuclei) and the cerebellum there are, therefore, both crossed and direct connections.

The first are as follows:

1. Fibers of the superior cerebellar peduncle that cross the red nucleus, sending out collaterals, and the field of Forel, and pass into the lenticular nucleus and thalamus of the opposite side.
2. Fibers of the superior cerebellar peduncle that terminate in the red nucleus of the opposite side, connecting with the cells of this nucleus.
3. Fibers of the superior cerebellar peduncle that originate in the red nucleus of the opposite side.
4. Collaterals of the pyramidal fibers that connect with the cells of the red nucleus that give origin of the fibers of the contra-lateral superior cerebellar peduncle.

The direct connections are represented by the following tracts:

1. Fibers of the superior cerebellar peduncle that transverse the red nucleus of the same side to the optic thalamus without decussation.
2. Fibers of the superior cerebellar peduncle that terminate in the red nucleus of the same side.

3. Fibers of the superior cerebellar peduncle that originate in the red nucleus of the same side.

4. Collaterals of the pyramidal fibers that connect with those cells of the red nucleus that give origin to the fibers of the homolateral superior cerebellar peduncle.

MR. DIGBY P. French, *Brit. Med. Jour.*, April 4th, gives an example of an insane family, in which the insanity came on almost simultaneously in the several members of it. The family consisted of the father, four sons, and one daughter. One of the sons became insane, and during a family evening religious exercise the son violently attacked the father. "The whole household became desperately excited, and a struggle of an unrestrained character ensued, in which the lunatic was horribly hacked about, mutilated, and killed." Following this calamity the others burst into neighbors' houses, declaring their own house in possession of devils, and all apparently in a maniacal condition. They were subsequently lodged in jail, the males in a maniacal furore. The mental contagion seemed also to transmit the same delusions of apprehension and persecution. The female member was committed to the district asylum, but the writer does not state the ultimate disposition of or result in the four remaining male members.

ALCOHOLIC INSANITY IN ITALY.—Dr. A. Volpini has published in *Il Policlinico* an interesting paper on "Alcoholic Psychoses in Latium, 1891-1894." He states that the evils of alcoholism are increasing in Italy—as elsewhere; but his researches relate only to Rome and the neighboring districts, for four years. During this period, of 2,169 patients received into the lunatic asylum at Rome, 340 (15.7 per cent) owed their psychopathy to alcohol—23 per cent of the males, 4.6 of the females. Every form of mental disease to which alcohol may give rise is included in these 340 cases, all doubtful cases being carefully excluded. Tables are given from which it appears that, as the production and consumption of alcoholic liquors in Italy generally have increased, the number of insane patients admitted to the Roman asylum for alcoholic diseases has grown.—*Dublin Jour. Med. Sci.*

BOOK REVIEWS.

Bidrag till Sveriges Officiella Statistik. K) Helso-Och Sjukvården. II. Öfverstyrelsens Öfver Hospitalen Underdåniga Berättelse för år, 1893. Stockholm, 1895. Kungl. Boktryckeriet. P. A. Norstedt & Söner. (Official Report of Swedish Public Hospitals for the Insane for the year 1893. Stockholm, 1895.)

This interesting Swedish report shows under treatment in hospitals of the State 3,435 patients, 1,851 men and 1,584 women. Of this number 46 per cent belong to the agricultural class, and 5 per cent are insane criminals. In the thirteen hospitals are 27 physicians, 26 office employes, and 395 attendants. The total cost of maintenance is \$500,000 per annum. Average cost per capita \$0.27 per day, that for food alone being \$0.11 per day. The chief forms of insanity are given as melancholia and mania; the principal cause of death, pulmonary diseases; the mortality, 4.5 per cent.

Great stress is laid apparently upon religious services. These are held at least once every Sunday and holiday. Communion is held four times a year and prayers are said morning and evening by the supervisors. The hospitals are also frequently visited by itinerant missionaries (so called passion-preachers). Much is done to give the patients systematic occupation. The feebler patients work at metal box-making and those not accustomed to physical labor do artistic wood carving. To stimulate industry a reward of from 1 to 5 cents per day and an increased diet is given to those who have performed a certain stint of work or shown exceptional skill.

Entertainments consist of coffee parties, with or without music, historical and religious lectures, and games of tenpins. The scientific report records a case of dementia paralytica præcox in a woman twenty-four years old, who, at the age of four years, had acquired syphilis from a nursemaid. In this case the hallucinations were unsuccessfully treated by hypnotism.

In the most northern province of Sweden, at Piteå, a new hospital for 300 patients has been built at a cost of \$300,000. The buildings are situated on a small island in the Pite River and form a square inclosure covering twenty-four acres of ground. In addition the hospital has 197 acres of mountain and moor land. The cost of the 221 acres of land was \$5,000. The building is furnished with modern improvements, electric light, hot and cold water throughout, and is heated by hot air from the engine room. Each ward has a stove, inaccessible to the patients, for use in extremely cold weather.

For fuel, wood only is used, furnished by an adjacent sawmill, which is connected with the hospital by a railway. The water supply, which is derived from the Pite River, is pumped from the river, filtered, and again pumped into a cement reservoir at an elevation of seventy feet. The pumps also furnish hydraulic power for a brewery (presumably for the brewing of a non-alcoholic "white beer," largely used in Scandinavia for cooking purposes).

The hospital is built of brick, with the exception of the north wing, which is of wood, as is also the hospital for contagious diseases, situated

outside the court and containing ten beds, bathroom, laundry, kitchen, and attendant's room.

The north wing, the administration building, contains the chapel, physician's quarters, and the steward's and matron's apartments, the two latter each consisting of two rooms and a kitchen. In the south wing are the store rooms, engine room, with four boilers, workshops, the hospital kitchen, and a special dining-room for employes. The east and west wings contain the wards.

The farm stock of the hospital consists of four horses, pigs, and reindeer. Out of a total of 14,950 insane in Sweden only 3,435 were cared for in State asylums at the date of this report, and it is a most creditable fact that of these latter only 192 paid absolutely nothing toward their support. Where shall one look for a like showing of government thrift and individual independence?

Mental Physiology, Especially in its Relations to Mental Disorders. By THEO. B. HYSLOP, M. D. London: J. & A. Churchill, 1895.

Dr. Hyslop, assistant physician to Bethlem Royal Hospital, dedicates his work to Dr. George H. Savage. It is an attempt to bring together *some* of the more prominent phenomena of the brain and of the mind, both in their normal and morbid aspects, without entering at length upon questions of epistemology or metaphysics. This does not mean that Hyslop disregards questions of epistemology and metaphysics, but he presupposes them, and furnishes a book which differs widely from those overloaded with the ever-ready, cock-sure, pseudo-explanations of evolution. With a sober and conscientious criticism, and in clear language, he gives a fair picture of our present knowledge of mental physiology, especially from the point of view of psychiatry.

In the introduction, the author gives a short sketch of the philosophical standpoints from which the relations between psychical and physiological phenomena have been looked upon, following a review of the entire field of psychology. The first four chapters (pp. 24-148) deal with fundamental facts of the anatomy and physiology of the nervous system, as far as it can be of importance for the general problem. Chapter V is devoted to the methods of study of the mind, and to a discussion of the various theories of the mind and of "unconscious cerebration." Chapter VI (pp. 170-204) treats the sensations. Chapter VII (pp. 205-224), perception. Chapters VIII and IX, sensory perversions and hallucinations (pp. 225-290). Chapters X-XIII take up the mental processes, attention, memory, feelings, and the will; and the last part of the work (pp. 455-528) goes over to the factors of insanity. An appendix on hypnotism and one on psycho-physics make up the closing pages of the book. In every portion the pathological features are treated along with the normal ones.

Probably the difficulties arising in an attempt to give a review of such a vast field are now more than ever serious. Long cherished views and methods of thought in psychology have been pushed away by the great prevalence of biological study. The comfort in idealistic solutions of the great tasks has vanished, while a broad basis has not been created by the

new science. To give everything that is known on psychology can not be intended; generalizations are few and not yet well enough founded. Thus the author is forced to give a more or less personal and arbitrary selection of factors which seem to him important. On the whole, he has chosen wisely; yet we must admit that in pure neurology (chapters I-IV) many points are brought forth which are not complete descriptions and yet more detailed than is needed for the final verdict that all these data may help us to understand neurology, but not the more fundamental problems of psychology. I refer to the data on chemistry, to the mentioning of a number of little founded and unimportant anatomical data while other essential points are left out or hardly discussed. With all this we must, nevertheless, admit that even these parts are suggestive and manifest a wholesome spirit of criticism.

The book deserves a hearty recommendation. It can not help filling a good purpose, both among alienists and others interested in normal and abnormal psychology.

A. M.

Kritische Psychiatrie, Kantian Studies on the Disorders and Misuse of the Pure Speculative Reason. By DR. MAX HERZ, Docent at the University of Vienna. 1895. Wien: Verlag der K. U. K. Hofbuchhandlung Karl Prochaska.

This little work will hardly find many readers among American alienists. It is an attempt at representing the disorders in insanity from the point of view of Kant's philosophy of the pure reason. The disorder called insanity lies, according to the writer, in the mechanism of thought, in the pure reason in Kant's sense, while there are no materials of concepts which could not originate in our own senses. Herz compares Meynert's position with that of Locke; with the introduction of Kant, the critical period must begin. Hence his intention to utilize the more advanced Kantian point of view as a basis for the study of the philosophy of insanity. He takes up:

1. Disorders of the general logic. Appendix: On the weakness and errors of judgment.
2. The pathological experience.
3. The formation of the concepts.
4. The pathological illusion.
5. The pathological ideation.

Our generation is ready to sneer at everything that has any claim to the name of philosophy. Since this attitude is very general, and therefore not often criticised, it is a convenient way to avoid the difficulties inherent in philosophical studies. Who will dare to blame the one who follows the great mass of practical workers in ignoring it? Still, we must confess that the widely spread phobia of metaphysical training and the disregard for strict methods of thought is, to a great extent, responsible for the great laxity and inconsistency of the views of many medico-psychological studies of to-day.

Since a knowledge of Kant is absolutely indispensable for anyone who wishes to have a grasp on the philosophical development of our times, the little work can not be denied a *raison d'être*. It may be considered as a valuable stepping-stone for an introduction of modern philosophy into the

study of insanity. It is not the idea of the reviewer that a knowledge of the practical work among the insane should necessarily rest on strict philosophy, but where a philosophical point of view is claimed, it would be desirable that it should be something better than the inconsistent pseudo philosophy of the medical world generally.

A. M.

The Criminology Series. Edited by W. DOUGLAS MORRISON, M. A. II. *Criminal Sociology.* By ENRICO FERRI, Professor of Criminal Law, Deputy in the Italian Parliament, etc. New York, 1896.

The partial translation of Professor Enrico Ferri's *Sociologia Criminale*, which has been chosen by Mr. W. Douglas Morrison as the second issue of his criminology series, is a decidedly valuable addition to the literature of its subject in our language. Those who have not adopted with enthusiasm all the views of modern criminal anthropology will yet find in this volume much for their approval, and but little that is not worth their studious thought and attention.

As alienists we have often to deal with those of the defective classes, whose actual status between the irresponsible lunatic and the criminal is in question, and there is no bearing of the subject of criminal anthropology that is altogether foreign to our special field of work.

The present work, in its English form, gives only a comparatively small space to the psychical and physical stigmata of the criminal, only fifty out of some 300 pages being devoted to the discussion of the data of criminal anthropology. The author is a conservative follower of the so-called Italian school, and his conclusions are generally safe and reliable. He recognizes that the dicta of the extreme followers of Lombroso are not altogether universally applicable, and has himself come under the criticism of his master for his admissions in regard to occasional criminals, those who are not properly to be classed with the criminal type. But like the others of the school, it seems to us, he still commits the error of not sufficiently recognizing the fact that the normal man, in the sense of being free from all degenerate tendencies, is only an ideal not realized in our daily experience. The born criminal only varies in degree from his fellows in society, and is a very rare production, independent of the effects of environment.

Professor Ferri recognizes five distinct categories of criminals: Criminal madmen, born criminals, criminals by contracted habits, occasional criminals, and criminals of passion. Psychologically we should put the first two together, but with certain practical differences; the others can be admitted by any one, and their distinction has only a very moderate medico-legal importance, if any. The distinction, however, between the insane criminal and the "born criminal," however, is a very important one, if real, and the fatalism that makes a man a victim of his degenerate organization is repulsive to one's better feelings, however logical and in accord with appearances it may be. The born criminal is simply a moral lunatic, or, at best, a moral and mental imbecile. It would be going too far to say that all criminals are mental weaklings, but there is nothing but what one might naturally expect in the finding that they exhibit, as a class, a greater proportion of degenerative stigmata than average good citizens.

The larger part of Professor Ferri's work is given to the discussion of the statistics of criminality and to suggestions of practical reforms. It is in this that the student of practical sociological questions will find the greatest interest, while it has less connection with the phase of the subject that particularly interests us as alienists. It is, however, profitable reading for any one who has to do in any way with the special class of which it treats.

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- Pyorrhoea Alveolaris.* By EUGENE S. TALBOT, Fellow of the Chicago Academy of Medicine. Reprinted from the *International Dental Journal*, April, 1896.
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NOTES AND COMMENT.

AMERICAN MEDICO-PSYCHOLOGICAL ASSOCIATION. — The fifty-second annual meeting of the American Medico-Psychological Association will be held at the Hotel Brunswick, Boston, commencing Tuesday, May 26th, 1896, and continuing until the following Friday. As the occasion will be one of more than usual interest, it is confidently expected that the attendance will be large. Whenever it is practicable for members to do so, it is recommended that hotel accommodations be secured in advance. The rate will be \$4 per day; rooms, with bath, \$1 extra; two persons, with bath, \$9.

It is earnestly requested that all members who intend to present papers forward their titles to the secretary as soon as possible.

It is hoped that an effort will be made to extend the membership of the association.

In accordance with the provisions of the constitution, notice has been given of two amendments to the constitution and by-laws. The first is proposed by Dr. Edward Cowles, and provides for the amendment of Article IX of the constitution to read: "The president and vice-president for the year shall enter on their duties at the *ending* of the business of the annual meeting *at which they are elected.*"

The second amendment is proposed by Dr. G. H. Hill, and provides for the amendment of Article I of the by-laws to read: "The meetings of the association shall be held annually. *The places of meeting shall be in Washington, D. C., and Chicago, Ill., alternately.*"

(The amending words are in italics.)

TRAINING SCHOOLS FOR ATTENDANTS.—It is safe to say that among the numerous factors contributing to the improvement of American hospitals for the insane within the past ten years no influence has been more potent than that of the trained nurse. The McLean Hospital School, and a few others, were already organized at that time, but the movement may be said to have received its first impetus in this country at the Lexington meeting of the association, in 1886, when Dr. Granger, then of the Buffalo State Hospital, New York, and Dr. Tuttle, of McLean, did so much to admonish and exhort the brethren. The good seed then sown has

borne fruit an hundred fold from the Atlantic to the Pacific, and from Maine to Texas, till to-day it is a poor hospital that does not possess its training school for attendants.

Yet, at this time, when diplomates are receiving their parchments from boards of trustees it is worth while to inquire if the hospitals are doing their full duty. The advantages of the new way are sufficiently apparent everywhere, but what are the defects that we may charge to the average training school of the United States? Is there not a certain lack of definiteness and thoroughness about some of the training, and are not some of our schools such in name only? The inquiry is suggested by the "graduation" season which is now upon us. It is noticeable that the elaborateness of the ceremonial, the spread-eagle character of the speeches, the noisiness of the brass band and the general fanfaronade of such occasions, are often in inverse proportion to the educational completeness of the course, the termination of which is thus celebrated. One would like to see an improvement in this direction in a new kind of graduation exercises that should be less subversive of the modesty that is generally held to accompany real merit and actual achievement. And again, something should be done toward the attainment of unity in aim and of a uniformity in training which shall be recognized as standard by the association. The report of the committee appointed last year with this object in view will doubtless be received with interest. Already in the state of New York examinations are uniform for all the State Hospitals, and a uniform curriculum has been prescribed. This requirement grew out of the new schedule of wages adopted throughout the State service, whereby "nurses," meaning thereby men and women who had gone through the training school, became entitled to higher compensation than mere "attendants." The wisdom of this distinction has already expressed itself in securing a better educated class of candidates for the service and in encouraging the pupil to careful and sustained class work. Altogether the signs are such as to give cheer and hope in so far as they point unmistakably to the fulfillment of what by the conservative spirits was considered to be a utopian project but ten or twelve short years ago.

EXPERT TESTIMONY.—The perennial and much discussed question of the needed reforms in medical expert testimony is receiving attention at the present time, as will be seen by the following from the New York *Medical Record* of February 15th :

MEDICAL EXPERT TESTIMONY.—The special committee appointed at the last meeting of the Medical Society of the State of New York to report upon the most feasible plan by which the present methods of introducing medical expert testimony can be improved, respectfully submit the following report :

Your committee, recognizing the difficulties which lay in the way of formulating any plan within the constitution of the State, have corresponded quite extensively with qualified members of both the legal and medical professions, and believe that in submitting the following preamble and resolution they present a consensus of such opinions held with reference to this subject, which, under present constitutional restrictions, affords the best method of obtaining medical expert testimony:

Whereas, The present method of obtaining medical expert testimony tends to lessen the value of such testimony and to bring the medical profession into disrepute; therefore, be it

Resolved, That the Medical Society of the State of New York would recommend the enactment of a law by the Legislature providing for the appointment of experts by the courts, and that only physicians of repute in the particular branch of medical science to which the question calling for expert opinion relates shall be appointed; that the function of the experts so appointed shall be advisory, and the number thus appointed shall be such as to adequately represent the court and both sides of the question at issue, as in the judgment of the court shall seem necessary; that the experts so appointed shall have full and free access to all the evidence in the case, as well as access to the plaintiff or defendant in person, as the case may be, if the issue involves his mental or physical state; that the experts shall submit to the court for transmission to the jury a report in writing, setting forth their conclusion, and the facts in evidence upon which such conclusion is based; that the cross-examination of such experts shall be limited to the facts and opinions embraced in their testimony as embodied in their report, and that their compensation shall be fixed by the court at a rate that is reasonable for professional services of such a nature.

Most respectfully submitted: J. B. Ransom, M. D.; Carlos F. MacDonald, M. D.; H. E. Allison, M. D.; S. B. Ward, M. D.; E. D. Fisher, M. D., *Committee*.

It is to be hoped that this attempt to secure legislation will be more successful than a similar one by the joint committee of the Illinois State Medical Society a year or so ago.

In an able letter to the *Medical Record*, Dr. Graeme M. Hammond points out that the fault lies with the lawyers rather than with the doctors, and this fact is not a favorable one, as regards the prospects of reform through State legislatures, which are naturally to a considerable extent controlled by the legal element in their memberships.

He also points out that no law could deprive an accused individual of his constitutional right of producing witnesses that will

benefit his cause, and he could therefore bring forward as much expert testimony as before, and possibly with it a greater weight of reputation than might be carried by the experts appointed by the court on the opposite side. This fact, which must be self-evident to any one on a little consideration, is also not encouraging.

In his opinion, the best solution of the question would be to have all examinations made jointly by the experts on both sides, and the entire proceedings at every interview taken down by a court stenographer, whose record should be available to both sides. Any information given either should be incorporated into the official record.

Another possible remedy which he does not suggest would be to allow the challenging of experts and the rejection of those who can not show that by experience or reputation they are entitled to be considered such. If this were practicable, which is doubtful, even were a legal standard enacted, we would avoid the scandal of seeing obstetrical and other specialists, and mere general practitioners, posing as expert alienists.

WOMEN ASSISTANT PHYSICIANS IN THE NEW YORK STATE HOSPITALS.—The dearth of female applicants for positions on the staffs of the New York State hospitals has been noted by the State Civil Service Commission, and the fact is accounted for by the *American Medico-Surgical Bulletin* as follows: In the first place the requirement of actual legal residence is a bar; secondly, the year's hospital service, or its equivalent of three years' practice. Only a small number of internships are open to women, and three years of practice is generally enough to settle them in a position where hospital appointments are not thought of by those capable of passing the examination. There are, moreover, no positions open for female internes in the State hospitals as there are for male internes. All these, the editor maintains, are together sufficient to explain the fact that seems to have puzzled the civil service board.

Dr. E. J. Chapin Minard, in a letter to the New York *Medical Record* of March 28th, attributes the fact to the three years' practice requirement, the smallness of the remuneration, and the lack of proper advertising for candidates.

The laws of New York seem in this matter to counteract each other, the one requiring female physicians and the other making it impossible to obtain them. Must special privileges be given to

women under the civil service rules to make it possible to obtain female assistants?

POLITICS AND SECTARIAN MEDICINE IN AN INSANE HOSPITAL.—The *Medical Standard* for February, 1896, gives an illustration of the combined workings of politics and sectarian medicine in the Norfolk, Neb., Insane Hospital, which would be amusing if not suggestive of cynicism and hopeless ignorance that are disheartening.

In the ups and downs of party politics a disciple (but an unworthy one) of Hahnemann was given control of the above-named insane hospital. This individual in his report remarks as follows:

“Two-thirds of all the patients in the Norfolk Hospital are scrubs, and frequently the runts of scrub families—driftwood, biped animal toadstools; flat-chested, thin-legged, lop-shouldered, sway-backed, hump-shouldered, knock-kneed, bow-legged, loose-jointed, slab-sided, mud-molded, squint-eyed, monkey-headed assortments of anthropoid, allied without energy, ambition, or prospects.’ The gentle tendencies of homeopathic psychiatry (anent which such pathos is biennially wasted before the Illinois Legislature) find expression in the following therapeutic suggestion of the Norfolk alienists: ‘It would be interesting to try the result of scorching the feet or administering corporal punishment, or blood-letting, or fright and shock, in some of the chronic cases of insanity and confirmed melancholia and mania. I am of the candid belief that such treatment would result in good to the patient.’”

Aside from the peculiar therapeutic views of the above, it would seem that any proper-minded physician might have selected a less brutal way of stating the hereditary misfortunes of the patients under his care in a public report. For the credit of the State such a publication should be repudiated. (See *Occasional Summary*.)

URICACIDÆMIA AND SUICIDE.—Dr. Alexander Haig has suggested that the undue prevalence of suicide at certain times may be connected with a depressive mental state, caused by vascular blood tension from uric acid poisoning, a theory that adds a little to our conception of the possible factors that coöperate in certain cases. It is, however, only one of the many possibilities of physical conditions leading to the mental state that induces suicide, which has an infinite number of physical conditions that may be thus

its primary causal factors. When self-murder is not a direct effect of moral obliquity, or weakness, or of false training, it is the result of bodily disease acting on a weakened brain and a social fact that falls directly under the purview of the physician as a guardian of the public health. The fact that we are so often unable to prevent it does not affect the fact that it may have as its remote cause even a comparatively slight physical derangement, too insignificant, perhaps, to attract attention. We certainly can not say with the *Lancet*, in commenting on Dr. Haig's suggestion, that such conditions are inconceivable. Suicide is too often only a symptom, a final one, it is true, from the nature of the case, but only one of the innumerable possible symptoms of the multifiform conditions of brain disorder.

THE NEW YORK "INSANITY LAW," reported recently to the New York Legislature, is the subject of severe editorial criticism by the *Medical Record*. It objects to the provision that the medical member of the commission should have had actual experience as superintendent or assistant in a State hospital, and proposes that he should be a skilled neurologist that had never been inside a State hospital.

With this proposal we can have no agreement; it is about as sensible as proposing for the general of an army a man whose life has been spent in "bible-banging." The other strictures of the *Record* are more reasonable and are upon the increased and extraordinary powers given by the proposed law to the lunacy commission, which powers it justly condemns. The chief changes it suggests, viz., the enlargement of the commission by appointment of one member for each hospital district, and the making their positions honorary, without pay, are at least worthy of consideration. The centralization of power in a close board of three paid officials, who are dependent for their positions upon the partisan politics of the State, is certainly a possible source of danger that ought to be fully considered before it is established by law.

THE GOLD CURE CRAZE that was at its height three or four years ago is now almost a thing of the past, and there is hardly anyone so poor as to do it reverence. Among the laity even it has become almost an object of derision; sensible men with any observing faculties whatever have come to recognize its failure. According to the Cincinnati *Lancet-Clinic*, seven of the leading gold-cure

originators have themselves become victims of the disease they claimed to cure, and are miserable wrecks. Like many other zealous, ill-balanced reformers they were ex-victims of the evil they aimed to amend, but their degenerate organizations could not resist temptation with no more than the broken reed of a gold cure for their hope of redemption.

For those who exploited these unfortunates no one can have any words of praise, save those to whom financial success is the one test of all good. Such success is not envied by true well-wishers of humanity, and we are beginning to see here and there a little of the evils that attend it. The foolish legislation that was attempted, at the instance of the lobbyists for the cures, is already working badly in the one or two States where they were at all successful, and the Keeley cure has come before the courts as an alleged cause of homicidal insanity.

In view of these facts it is, on the whole, comforting to know that its day is nearly past, and that the Keeley and other gold cure establishments are becoming obsolete. Of twenty-one existing in New York and vicinity, in 1894, according to the *Lancet-Clinic*, only two now remain; of nineteen in Boston, none; and that from other parts of the country the same story comes of their disappearance and decay. The gold-cure craze will take its place in history with other records of popular gullibility and fatuity.

PSYCHIATRIC COURSE IN GERMANY.—As a result probably of the recently exposed scandals in the management of certain German asylums, the minister of education has issued an order that candidates for public medical positions must have attended a course of lectures on psychiatry at a German university, and attended the practice of a lunatic hospital for six months, or have held the position of interne in such hospital for three months. The hospital attended must have not fewer than 150 mental cases yearly. This order comes in force in October, 1896, and applies to all candidates who are not already in their last year of study.

UNFIT APPOINTMENTS.—That appointments to asylum positions in Great Britain are not always according to fitness, and that other influences than a conscientious appreciation of the needs of the institutions and their patients are sometimes predominant, is evidenced by the recent appointment of the medical superintendent of the Portsmouth Lunatic Asylum. The idea of the appointing

power seemed to be that all that was wanted was good executive ability, without any regard to special qualifications as an alienist, a notion that we have often enough deplored as disastrous to the welfare of the insane in this country. It is probable, from all appearances, that the same sort of political influences are occasionally effective in England as here.

HYPNOTISM.—Dr. Kuhn, according to an abstract in the *New York Medical Record*, has had the opportunity of observing two Indian fakirs who were able to simulate death and undergo interment for the periods of six weeks and ten days respectively, and then be revived again to their normal condition. They are, he says, highly hysterical, and the condition into which they pass is a sort of self-induced hypnotism.

The cases are claimed to be well attested, and Dr. Kuhn considers that there is no doubt of their genuineness.

The exhibition at the Royal Aquarium (*Lancet*, March 21), in which a man was hypnotized and buried in a grave nine feet deep, where he was left for six days, then disinterred and awakened, is not a circumstance that can receive the approval of a civilized community. Granting the usefulness of the trance state, which is indeed very doubtful, the necessity for entombment can not be evident for any purpose, and precludes the possibility for relief in case of the failure of the trance state to hold its prescribed period. It is sincerely to be hoped that such horrible exhibitions may not be repeated under any requirement of so-called scientific research.

CONSULTING BOARDS.—Dr. John B. Deaver of Philadelphia has declined to accept the appointment as consulting surgeon to the Norristown Hospital for the Insane, on the ground that such services should not be rendered gratuitously to State institutions. It is not surprising that some one should have taken this stand, since the *quid pro quo* which a general hospital can give to its appointees in such capacity in the way of reputation and increased practice is not furnished to any extent by hospitals for the insane. These are, moreover, generally situated at inconvenient distances from medical centers, and therefore must make heavier drafts on the time and labor of a busy physician, who is likely to have all the charity work on his hands that he can afford to do without remuneration. It looks well for a hospital to have a list of more or less illustrious names as

a consulting staff, but we fear that in many cases the amount of actual service required is microscopic. Dr. Deaver, doubtless, was too conscientious to act as a dummy, or the Norristown Hospital is more exacting than is the rule; either way the result is the same.

It should not be understood that it is intended here to decry all consulting boards; they may perform very many functions, but they seem to be liable to be more honorary than actually useful.

STATE AND CITY AT OUTS.—The Boston and New York city authorities are at wordy war with their respective State authorities. The New York State Lunacy Commission demands a new suit of clothing for every pauper patient committed. The city claims this means a needless expense of \$50,000 annually, and the State, through its board, claims that health and cleanliness require this expenditure. The truth is probably somewhere between these extreme claims. It would seem possible by proper examination to determine the just requirements in each individual case without attempting a wholesale policy upon either side.

Massachusetts and Boston city authorities are also waging a conflict over the proper allowance for support of city insane in the State institutions.

The State in each case seems to be on the side of greater liberality toward the insane.

AN INTERNATIONAL COMMISSION ON INSANITY.—Insanity appears to be coming to the fore as an international question. It is said that notice has been given to the English Parliament of a resolution to the effect that, in the interest of the general welfare, it is desirable that an international commission be appointed to investigate the causes of insanity, the increase of which is becoming one of the most important social questions of the times.

The United States, which has been a special sufferer by having the insane and degenerates of other lands thrust upon its care, should certainly have its voice in such a commission if it is appointed.

MARRIED ASSISTANTS IN HOSPITALS.—Some very estimable, but probably altogether too suspicious, persons are endeavoring to secure legislation in one or two States of the Union to the effect that only married physicians shall be employed in asylums or hospitals for the insane where female inmates are cared for. While this propo-

sition is not complimentary in its inferences to unmarried physicians, it is hardly more unreasonable and would, if adopted, be possibly less damaging to psychiatry than the opposite practice of a rigid rule excluding all married assistants—a rule that seems to be in favor in some institutions, and which is likely in its working to exclude some valuable men from the specialty.

NATIONAL CONFERENCE OF CHARITIES AND CORRECTIONS.—We are favored by Dr. Bell of the State Asylum, Newberry, Mich., who is chairman of the Committee on Insanity, with the following titles of papers to be read before the next meeting of the National Conference of Charities and Corrections, at Grand Rapids, Mich., June 4 to 10, 1896:

Dr. Percy Wade, Baltimore, Md., "Convalescent Homes for the After Treatment of the Insane."

Dr. Jules Morel, Ghent, Belgium, "Observations as an Alienist for Five Years to the Belgium Prisons."

Dr. Hal C. Wyman, Detroit, Mich., "Some Methods of Caring for our Chronic Insane Poor."

Dr. O. R. Long, Ionia, Mich., "Care of the Criminal Insane."

Judge A. J. Mills, Kalamazoo, "Suggestions Looking to the Increase of Insanity."

Dr. H. A. Tobey, Toledo, Ohio, "State Care versus County Care."

Hon. J. E. Heg, Lake Geneva, Wis., "County Care."

Dr. William A. Gordon, Oshkosh, Wis., "The Separation of the Chronic from the Acute Insane in our Hospitals."

Hon. W. P. Letchworth, Buffalo, N. Y., "Provision for Epileptics."

THE SESSION OF THE FRENCH CONGRESS OF ALIENISTS AND NEUROLOGISTS will hold its annual session this year at Nancy, commencing August 1st. The following have been assigned as special subjects for discussion at the meeting: "The Pathogeny and Pathological Physiology of Hallucinations of Hearing," "The Symptomatology of Tremors," "The Confinement of Lunatics in Special Institutions," "The Treatment of Lunacy," and "Legislation for the Insane." •

THE DEFECTS IN OUR LAWS REGARDING THE PLEA OF INSANITY in criminal cases are well shown by the following Missouri case reported in a recent issue of one of the Kansas City medical publications. It says:

Only a short time ago in this county a man killed another with a coupling-pin, robbed him of \$40 and divided it with an accomplice. He denied all knowledge of it when accused, but "broke down and confessed all" when told that his companion in crime was in jail and had told everything. This cold-blooded assassin was pronounced not guilty on the plea of insanity, and sent to our "poor farm" for safe-keeping. His attorney, in a few weeks thereafter, went before the county court and asked to have him released, giving the court as a reason for such action, that should he be kept longer among the paupers and insane it would surely drive him crazy. The court released him.

Such cases as this are the *reductio ad absurdum* of the silly humanitarianism that seems to sometimes dominate the legal mind when the sequestration of the insane is in question.

IN THE ACTUARIAL SOCIETY OF AMERICA recently a paper was read by a well-known New York insurance man, in which he stated that each period of financial stringency was followed by a marked increase of mortality from brain diseases and disorders of the nervous system. This, he declared, was the result found of his study of statistics which were available to him, and he pointed out the physical and mental ailments most unfavorably affected by such conditions.

FIRE IN A NEW YORK ASYLUM.—On January 24th there was what threatened to be a serious conflagration at the New York Asylum for Insane Criminals at Matteawan. The fire was of incendiary origin, one of the inmates succeeding in setting the buildings on fire in five different places. Fortunately the fire was discovered sufficiently soon to prevent their destruction. The event illustrates one of the dangers to be guarded against in the case of special institutions for the criminal insane.

NEW PSYCHIATRICAL JOURNALS.—The first number of the new publication supported jointly by the State hospitals of New York and the Lunacy Commission, of which all our readers were not long ago advised, has made its appearance. It is called *The State Hospital Bulletin* and fully meets all the expectations raised by its prospectus. The first number contains seventeen different articles, each of which is, in its way, a valuable contribution to the literature of psychiatry. The plan of having a medium for recording the clinical and pathological data of the different State hospitals under a uniform direction is an admirable one, and we look to see the *Bulletin* take a very high rank in its special field.

A new neurological and psychiatric serial of more than ordinary merit and value is the *Rivista di Patologia Nervosa e Mentale*, edited by Professor Tanzi of Florence, with the collaboration of the well-known alienists, Tamburini and Morselli. It is published monthly at Florence.

Another similar addition to the periodical literature of the specialty is the *Obozrinia Psichiatry, Neurologi e Experimentalnoi Psychologi* (Review of Psychiatry, Neurology, and Experimental Psychology) of Professor Bechterew of St. Petersburg. The names of the editors of these new publications are, in themselves, a guarantee of their high scientific character.

THE STATE LUNACY COMMISSION OF NEW YORK decides that all idiots must be removed at once from the State hospitals, on the ground that the law placed under their supervisory control the institutions for the care and treatment of the insane, excluding those for epileptics and idiots. Taking account of the presumed fact that all idiots in the State hospitals were committed to them as insane (and insanity and idiocy are not altogether mutually exclusive), there would seem to be some basis for criticism of this decision. It might be very difficult in some cases to certify that a so-called idiot was not also insane, though undoubtedly his removal would be a great convenience in an overcrowded hospital.

THE program of the third annual meeting of the Association of Assistant Physicians of Hospitals for the Insane, at Independence, Iowa, May 7th and 8th, is at hand. It includes papers by Drs. Warner, Boody, McCorn, Morse, Stearns, Phelps, and Neff, and promises an interesting session.

PROFESSOR LOMBROSO has been subjected to a verdict mulcting him 2,500 francs' damages for plagiarism from M. Crepieux-Janim in his work on graphology. It is the more remarkable as the work of the French author is not by any means an unknown one, but has a prominent place in the bibliography of its subject.

THE estate of the late Dr. D. Hack Tuke is stated to have amounted at his death to thirty thousand pounds (\$150,000).

CORRESPONDENCE.

The following correspondence from Gen. R. M. Brinkerhoff gives the impressions of one of the best known and most honored of the philanthropic workers of this country, as received from the rapid examination of hospitals and asylums for the insane abroad. We are so apt in this country, in spite of a certain reputation to the contrary, to disparage our own institutions, that his comparisons and the glorification of the "Ohio idea" may be both refreshing and wholesome:

THE CARE OF THE INSANE IN EUROPE.

In considering methods for the care of the insane in Europe, it must be borne in mind that the social conditions of the people are very different from what they are in America, and hence in their asylums the distinctions between the rich and the poor are more pronounced than with us. Then the distinctions of birth divide society into various classes in the care of the insane.

In Ohio, in our hospitals for insane, none of these distinctions are recognized, and any citizen of our State bereft of reason, whether rich or poor, high born or low born, at once becomes the child of the State, and as such is entitled to equal care and treatment, and entirely at public expense, in all State hospitals.

Ohio was the first State in the world to adopt this policy, and it is her highest glory. Other States followed, but in Europe such action would be impossible, and therefore this fact must be borne in mind in comparing American and European hospitals.

In Ohio there are no pauper insane, and the patient without a penny is entitled to equal care with him who has millions at command, so long as they are in a State hospital; and it is greatly to the credit of our system that money can not buy any better care in private asylums.

RICHMOND DISTRICT ASYLUM.

The first asylum we visited was the Richmond District Asylum in Dublin, Ireland, of which the eminent alienist, Dr. Connolly Norman, is superintendent.

Here is an average of about 1,500 patients, who are committed

by magistrates upon the certificate of physician. The district from which these patients come has a population of about 700,000.

The asylum occupies fifty-two acres of ground, on the north side of which is the "male house" and on the south side the "female house." The first is on the linear plan and the latter is the block system, with wards surrounding a court.

Between these two main buildings are several detached buildings; one is for female epileptics, one for a fever hospital, two female infirmaries, and two chapels—one for Catholics, one for Protestants. All of the grounds are inclosed by a wall.

In its equipment the Richmond Asylum is not equal to any of our Ohio asylums, but in the care of the patients it is very creditable, under the circumstances of its overcrowded condition and insufficient equipment.

The institution is controlled by a board of thirty-one governors who meet every two weeks.

SCOTCH ASYLUMS.

In Scotland, as elsewhere in the British Islands, there are two grades of asylums, as described by Dr. Yellowlees: "The pauper insane, who require asylum care, are all accommodated in rate-provided asylums, where no profit is required to be made out of their maintenance; while of the private patients who require asylum care, about 90 per cent are accommodated in the Royal Asylums, where no proprietary interests exist, and where the thought of a dividend never hampers the administration. These Royal asylums of Scotland are seven in number, and are conveniently distributed throughout the country at Aberdeen, Dundee, Montrose, Perth, Edinburgh, Glasgow, and Dumfries. They are all public institutions, in the sense that they are the property of the public, by whom their directors are appointed, and that they exist for the public benefit, no individual deriving any direct profit from their revenues; but they are private institutions in respect of the privacy the patients enjoy, and in respect that they derive no support whatever from Government or from public funds, but depend entirely on the board paid by patients."

From the statement of Dr. Yellowlees it is evident that the Royal asylums correspond in America to such institutions as the Philadelphia Hospital for the Insane, Bloomingdale in New York City, and the Butler Asylum at Providence, Rhode Island. In short, they are private asylums under Government inspection, sup-

ported by money received from pay patients, and, to some extent, by contributions and endowments from benevolent people who seek to aid worthy patients who can not pay full rates.

In the annual report of the Glasgow Royal Asylum "the yearly rates of board for private patients are, \$200, \$300, \$450, \$600, \$900, \$1,000, \$1,250, \$1,500, \$2,000, and upward."

Patients not private are those for whom a part of their board is paid from the public funds and are thus kept out of the pauper asylums.

The Royal asylums, for the few who are able to pay, doubtless compare fairly well with our average Ohio asylums, but for the pauper many, the accommodations and treatment are no better than in the poorhouses of our American cities.

GARTNAVEL.

The Glasgow Royal Asylum Gartnavel is located about three miles from the center of the city, and, for twenty years or more, has been in charge of the eminent alienist, Dr. David Yellowlees.

It occupies sixty-six acres of ground and has 490 patients, 394 of whom are private, and the remainder are paid for by parishes.

The asylum was built about fifty years ago, in the Tudor gothic style, and stands in a lofty position in the center of its grounds. It consists of two separate houses, for the higher and lower classes respectively, with all the needful administration buildings.

It is well administered in all its departments, and is a very creditable institution. The Royal asylums of Scotland were pioneers in the modern system of non-restraint, and to them the world owes a debt of gratitude for the large advance in the care of the insane in recent years.

GARTLOCH ASYLUM.

We were informed that a new asylum at Gartloch, on 700 acres of land, eight miles from Glasgow, was nearly completed, and would be occupied early in January, 1896, which is upon the cottage system, and very complete in all its appointments.

We did not have time to visit it, but had the pleasure of meeting its prospective superintendent, Dr. Isandal Oswalt, who for some years past has been the first assistant physician at Gartnavel.

DUNDEE ROYAL ASYLUM.

The Royal Asylum at Dundee is located on 250 acres of land, and is similar to the Royal Asylum at Glasgow in its equipments and methods. At the time of our visit there were 405 patients.

The report for the previous year shows 386, of whom 157 were males and 229 females. Of these only 78 were private cases and 308 were paupers.

The pauper patients are paid for by parishes at the rate of about \$2.50 per week, including clothes.

ROYAL EDINBURGH ASYLUM.

The Royal Edinburgh Asylum at Morningside is one of the most famous in the world, and Dr. T. S. Clouston ranks at the very head of his specialty, and has been one of the leaders in the new era for the care of the insane.

Morningside had its beginning in 1813, and has developed with the years until it now has accommodations for 1,000 patients. The grounds occupied comprises seventy acres, known as the Craig estate, and there are now eight houses, two of which are cottage hospitals for those who need special care and nursing. The other six are known as Craig House, Old Craig, Bevan House, Queen's Craig, South Craig, and West House. Of these Craig House is just completed at a cost of \$3,000 for each bed, is intended to embody the most advanced ideas to date in arrangement and equipment, and will accommodate 200 patients. The rates of board per annum vary according to location and accommodations. In the West House they are from \$125 per annum to \$200; in the Craig House from \$400 to \$2,500; and in the other houses from \$500 to \$5,000.

Morningside certainly stands very high, and is well worthy of its great reputation.

Its equipment and administration are admirable, and in the segregation of its buildings it approaches our cottage system at Toledo more fully than any other British asylum, but its classification according to ability to pay does not harmonize with our Ohio ideas, and upon the whole its results in treatment are no better than ours.

However, their social conditions in Scotland would not allow the adoption of our system, and we certainly would not care to adopt theirs.

In conversation with Dr. Clouston, I was glad to find that he sympathized with our ideas as to the cottage system, and would have been glad to have had a larger segregation at Morningside if the conditions would have permitted it. The general methods of treatment, upon the non-restraint system, are similar to ours. Of course, under the social conditions, associated dining rooms, which, with us, are very beneficial, are not attainable.

The medical staff, in addition to the superintendent, comprises three assistant physicians and a pathologist.

HOLLOWAY SANITARIUM.

July 26th we visited the Holloway Sanitarium, at Virginia Water, twenty-one miles northwest of London.

This is what is known as a registered hospital for the insane, and, like the Royal asylums of Scotland, is a private institution under government supervision. It was created and endowed by the famous patent-medicine man after whom it was named. This is an institution for rich people, and in cost of construction and in its operating expenses is the most costly asylum we found in Europe.

The cost of construction was about \$5,000 per bed, and its superintendent's salary is \$10,000 a year. In its equipment everything is of the best, its administration is able and enlightened, and its superintendent, Dr. Sutherland Rees Philips, is a very superior man.

The doctor treated us with great courtesy and kindness, and showed us the various departments of the institution, and took us through the grounds to the station when we left.

There were about 400 patients, who were cared for by special attendants, and were supplied with every comfort that money could buy.

Of course it is not an institution with which to compare our State hospitals, but still, in curative results, I am quite sure we would not fall behind. The medical staff, besides the superintendent, consists of four assistant physicians and a medical attendant.

BARNWOOD HOUSE.

On our return from the continent, in August, we visited two insane asylums at Gloucester, in West England, one of which is known as Barnwood House, and, upon the whole, was the most satisfactory hospital for insane we saw in Great Britain. Like Holloway, it is a private registered hospital, and is located on 200 acres of ground near the city. It is not as costly in construction, equipment, or administration as either Holloway or Morningside, but the high intelligence displayed in its management and the general tone of the place was more satisfactory than either of the others. There were 160 patients, and the rates for board were about the same as at Morningside. There are two outlying colony houses on the grounds, and a handsome chapel.

The medical staff consists of the superintendent and two assistant physicians.

It is under the inspection of the commission in lunacy and also of a committee of magistrates.

GLOUCESTER PAUPER ASYLUM.

We also visited the Gloucester Pauper Asylum, which is a new structure on 200 acres of land. The buildings were of brick, quite plain, but substantial, and well arranged. This institution is owned and supported by the county, and seems fairly well administered.

It accommodates about 400 patients, and is so planned as to be easily enlarged.

GENERAL VIEW.

Upon the whole, British asylums are well administered, and are fully abreast of the best modern ideas for the care of the insane, but in the care of the insane of all grades, whether rich or poor, our Ohio system is certainly in advance. There are special features worthy of imitation, but they have more to learn from us than we have from them.

BOARDING-OUT SYSTEM.

Among the special features worthy of imitation to a limited extent in America is the boarding-out system, which is in operation quite extensively in Scotland. Chronic, harmless patients are boarded out in families in the country, under careful supervision, and they have larger liberty and more natural conditions than they can have in an institution. It works well in Scotland, and is under trial in Massachusetts.

VOLUNTARY PATIENTS.

When mental disturbance is such as to render home treatment inadvisable, but yet not such as to demand official action, opportunity is afforded to the patient for placing himself voluntarily under asylum treatment, and this ought to be allowed in Ohio, for in this way the care of patients can be obtained during the curable stage of their affliction, and the official brand of insanity is avoided.

CLINICAL INSTRUCTION.

British alienists insist that every public asylum should be available for scientific research and clinical teaching of insanity, to students of medicine, and to a limited extent this ought to be the rule in America.

The State of Oregon allows a few students, as a reward for attainments at the medical colleges, to spend a year at the insane asylum at Salem as assistant physicians, at public expense, and a small salary is allowed them. This practice is not only educational to the medical profession, but it is also helpful to the institution.

TRAINING SCHOOLS FOR ATTENDANTS.

British alienists also insist that the selection and training of attendants demand the utmost care, and that every asylum should have arrangements for instructing them in their difficult and trying duties. They insist that the wisest plan of treatment is in vain unless it can be carried out by a competent nursing staff.

FRENCH ASYLUMS.

We were in Paris two weeks, but our time was so taken up with the Prison Congress that we had no time to visit asylums as we had hoped. However, I did visit one insane asylum in company with Dr. H. C. Rutter, superintendent of our Ohio Asylum for Epileptics. I presume it was not a fair sample of French institutions, and therefore I do not give its name, and presume it is no more a type of French asylums than Blackwell's Island or Flatbush would be of asylums in the State of New York. Surely the city which, through Pinel, gave the first great impetus to modern methods in the care of the insane can not be behind other continental cities.

SWISS ASYLUMS.

In Switzerland we visited an insane asylum at Munsurgen, twenty miles from Berne. It is a new asylum built at a cost of \$800 per patient, and is well planned and well administered. It is of brick, on the linear plan, and accommodates 600 patients. Pay patients are housed in a separate building. At Zurich we visited an asylum for epileptics which, in methods and results, is equal to any I have ever seen. It was established in 1886 and is in charge of Dr. F. Kolle, a wise and efficient superintendent, who has been in the specialty for thirty years.

The institution occupies seventy-five acres, and is large enough to afford ample occupation for the inmates, who numbered 148. Hygienic employment, which is also productive, is the main reliance for the improvement of patients, and the running expenses are thus reduced so that the per capita cost is only 13 cents a day, or \$47.32 per annum.

GERMAN ASYLUMS.

In the care of the insane German alienists rank very high, and this reputation was very well sustained by the few asylums we visited. The first of these was at Achern in the province of Baden. It was built fifty-three years ago, and therefore in construction is not up to modern methods, but it is well administered in all departments and is very creditable. They only have thirty-five acres of land, where they ought to have 500 acres, but yet they find employment for 60 per cent of their patients, both male and female, and make it very largely a reliance for their improvement. They have 480 patients, mostly acute cases. Chronic cases are sent to Emmendingen.

In the care of patients there are only four or five to one attendant, and no mechanical restraints are allowed, except for surgical cases, but airing courts are still retained. The medical staff consists of the superintendent (or director, as he is called) and five assistant physicians.

There are also two chaplains employed who give their entire time to the work. Low salaries prevail as in Ohio, and the superintendent only receives \$1,250 a year.

Officers and employes, however, are permanent in their positions and receive a pension on retirement.

As the results of the system they claim that 60 per cent of patients are discharged cured, or much improved, which is certainly a very good showing.

FRANKFORT-ON-THE-MAIN.

At Frankfort-on-the-Main we visited an asylum established by the city on thirty-six acres of ground, in which we found 160 patients, all of whom are acute cases. Chronic patients are sent to private asylums. Some are pay patients and some are supported by the city. There are three classes: (a) Each patient has his own room. (b) Two in a room. (c) Associated dormitories for pauper patients, for whom the city pays two marks a day. Sixty-seven per cent are employed, but of these more are men than women. Not more than five patients are assigned to one attendant, and in some cases only one. No mechanical restraints are allowed, and but few are in close rooms.

There are four physicians, including the director.

The institution is governed by a committee of five citizens and a city magistrate, who meet once a month, and seems very well administered.

DUSSELDORF.

At Dusseldorf we visited the Province Insane Asylum built by the Rhine Province and opened in 1876.

Here we found 580 patients — 312 men and 268 women. As at Frankfort they have pay patients and paupers, about equally divided.

They have 100 acres of land, upon which is an outlying colony of about 100 patients. The institution is built upon the segregate and cottage system, separated by walls and airing courts.

The medical staff comprises the director and three assistant physicians, and two volunteer physicians. Every day there is a conference of physicians at which cases are considered. The asylum seemed well administered in all its departments.

HOLLAND ASYLUMS.

In The Netherlands we visited but one insane asylum and that was in the old city of Zutphen in the province of Gelderland, but it was one of the finest institutions we found in Europe. Holland is well up in all of her benevolent, charitable, and correctional institutions and if Zutphen is a fair sample they must be very high grade. Here we found about 500 patients who are divided into four classes. (1) Those who pay 1,100 guilders a year, (2) 800 guilders, (3) 300 guilders, (4) 250 guilders. A guilder is 66 cents of our money. The first two classes have single rooms and special attendants. It was the cleanest asylum I have ever seen, and everything about it was up to the highest standard of modern methods in the care of the insane.

GHEEL.

In Belgium we visited the famous asylum at Gheel, the oldest in the world. It is located twenty-six miles east of Antwerp and we made a special trip to see it. Gheel has a strange history. It is literally an oasis in a desert; a comparatively fertile spot, inhabited by 10,000 or 12,000 peasants, in the midst of a sandy waste.

Historically Gheel is noted as the spot where a woman of rank, a Christian convert, was murdered by her pagan father, who in his brutal revenge gave the church a martyr.

In the course of time a shrine arose in her honor and the shrine of St. Dymphna became a resort for the sick, the sorrowful, and the insane visiting the tomb of the Christian virgin, and the last, it is said, were restored to sanity and serenity. Dymphna, therefore,

became the tutelar saint of the insane, and for ten centuries her shrine has been the resort of that afflicted class. As the years went by a community of peasant families was formed, who made it a business to take care of insane people. Of course the old superstition of cures by religious exercises at the shrine of the saint has passed away long ago, but the care of the insane by boarding in families, which for generations have made such care a business, continues to the present. There are now about 1,500 such families and with them about 1,800 patients are boarded. For centuries there was no official supervision of these people, but in 1855 the government assumed control and Gheel is now under careful medical supervision.

The medical superintendent, or director, is Dr. F. Al. Peters, a very competent alienist, who gave us every attention and showed us the place.

There is a central building with receiving wards, where all patients upon arrival are kept under observation until their condition and characteristics are carefully studied, and then, if considered trustworthy for boarding out, they are assigned to a family. All families are registered and known, so that selections can be made when the conditions are best suited for the patients. As a rule only one patient is assigned to a family, and never more than two. These patients become members of the family with which they are boarded, and, when able, do a share in the work of the family. The effect produced by large numbers of lunatics wandering and working in the midst of a thriving sane population, whose support depends largely on a traffic in insanity, is both striking and picturesque.

In this enjoyment of comparative liberty, and of what is called the free air treatment, these patients are, on the whole, contented, tranquil, and healthy. Violence is rare, and suicides are not more frequent than in our American asylums.

Of the 1,800 patients the larger part are paupers, who are supported by the government at an average cost of about \$1 per week. Pay patients pay from \$250 to \$1,000 a year.

Bedding, clothing, and medical attendance is paid for by the State. On the day of our visit there were under observation at the central hospital 64 patients—29 women and 35 men.

If patients are found unsuitable for boarding they are sent away to close asylums. Upon the whole, Gheel impressed me much more favorably than I had expected, and, under the existing conditions,

with a community which has known this kind of work for centuries, I am not sure but the chronic insane are as well cared for and as happy as they are anywhere.

We were informed that another colony on the Gheel system had been established in the Walloon district of Belgium, and was occupied by those speaking the Walloon language.

From Gheel, doubtless, come the boarding-out system of Scotland and elsewhere, and the colony system, with modifications, found in connection with a number of our American asylums, and notably at Pontiac and Kalamazoo, in Michigan, and at Salem, Oregon, and is worthy of imitation in connection with our Ohio asylums.

HOSPICE GUISLAIN.

We had hoped to spend a day at an insane asylum in Ghent, known as Hospice Guislain, under the charge of the distinguished alienist, Dr. Jules Morel, but we were so pressed for time that we only had half an hour for a brief run through that institution.

We were very glad, however, to make the acquaintance of Dr. Morel, who speaks excellent English, and to see even a little of his work. It was easy to see that his institution was admirably administered and worthy of careful inspection and study.

FROM MILWAUKEE COUNTY HOSPITAL FOR THE INSANE.

A system has recently been devised by the undersigned and put in operation in this hospital, designed to abolish entirely the use of lanterns by night nurses. The inconvenience of handling as well as protecting the lantern from damage and destruction at the hands of a violent patient and risks of setting fire to bed clothing, in such an event, are too obvious to demand a lengthy explanation. Under the present system the attendant can operate the lights in the rooms singly by means of switches of a peculiar design, operated by a key outside each door, or collectively by means of a central switch in the clothes-room of each ward. The lamps are located on the ceiling, and are frosted to obviate the startling effect produced by the flashing of a lantern at the transom, as formerly, or by that of a clear glass electric lamp-globe. In the convalescent wards, however, the lamp is located on the wall in a neat fixture and at proper height to render reading in their rooms in the evenings agreeable to the patient. The innovation has proved a

means of pleasure as well as comfort to many who heretofore were obliged either to dress or undress in darkness, or to make their toilet in the corridors in the presence of fellow patients. Again, many nervous, hysterical women, who have been accustomed to a dim light in their bedroom at home, find it comforting and tranquilizing to be allowed a soft night-light provided in this manner. In case of fire or other emergency this system, operated in conjunction with the electric door-opening system, will tend still further to provide immunity from loss of life.

The establishment, about a year ago, of an internal telephone system in this hospital, connecting each ward and department, including the groves, with a central station located in the medical office, together with a carefully prepared set of regulations governing the service, has been effectual in reducing to a minimum complaints of abuse on the part of inmates. The regulations forbid absolutely laying hands on patients to compel them to do anything—even what might seem reasonable to the attendant—without first conferring with a medical officer and obtaining instructions how to proceed. The only exception made is in cases of self-defense, and that is so rare and the character and disposition of the patient so carefully studied and thoroughly known, that it does not often admit of such a reason being assigned. The same rule applies with equal force in the matter of the temporary seclusion of an excited patient. I am convinced from my experience of this method that it forms the most effective bar to abuse, willful or ignorant, on the part of nurses.

During the past four months the work of providing quarters for the attendants entirely separate from the wards has been in progress, eight at present writing having been provided for, and in the course of two weeks the entire force will, by a rearrangement of the administration building and of the employes' quarters, be comfortably situated and away from the atmosphere of their daily duties. This change will enlarge our capacity on the wards to the extent of about fifty beds.

The training school, which was in a dormant state for the past three years, has again been revived and regular sessions are held under the immediate charge of Dr. W. F. Beutler. At present the school is in a very satisfactory and highly encouraging condition.

During the past winter the undersigned delivered a series of clinical lectures to the senior class of the Wisconsin College of Physicians and Surgeons, and it is the intention to repeat the

course at the opening of the next term in October. The students exhibited a thorough interest in the subject, and in the cases presented for their observation, and it is hoped they received much of practical knowledge which will be of service to them in their future work as practitioners.

The plan of having a clinical assistant on the staff during the summer was tried last year and proved not only advantageous to the hospital, but it is believed of practical benefit to the student. The same plan will be pursued the coming season.

M. J. WHITE, M. D.,

Medical Superintendent.

MILWAUKEE HOSPITAL FOR INSANE, WAUWATOSA, WIS.

WHAT IS INSANITY?

This inquiry was suggested by reading the January number of the *Journal of Mental Science*. In a discussion on "Insanity of Conduct," reported in that journal, Dr. Mercier laid down the proposition that "insanity is not a disorder of mind; that there may be disorder of mind without insanity; and that in insanity there is much beside disorder of mind. At the same time, I must not be understood as saying that there can be insanity without disorder of mind." The case suggesting these remarks was that of a man who had shown marked literary and practical ability, while indulging in periodical debauches of drinking and unnatural sexual vice, in which he did not seem to perceive any turpitude. It would seem probable that Dr. Mercier refers, in speaking of "mind," to the intellectual faculties, and does not include, as many would, the disposition, taste, and propensities.

A. Maude, L. R. C. P., in an article on "Mental Changes in Graves' Disease," while admitting that insanity does occur in connection with this malady, maintains that there is a typical psychical change short of insanity. This, according to his observation, is characterized by irritability, discontent, impatience of contradiction or advice, impairment of memory, and a condition which Reynold's characterized as "chorea of ideas," consisting in an inability to think of anything consecutively.

Dr. Henry Head writes of "Mental States Associated with Visceral Disease in the Sane." Amongst these he includes an acute but transient melancholia, with vague but intense feeling of impend-

ing ill; hallucinations of sight, hearing, and smell, and delusions of suspicion, in which the patients constantly imagine that people are talking about them in a derogatory way.

Dr. E. S. Reynolds, writing of "Mental Symptoms Occurring in Bodily Disease," says he has "on several occasions seen patients suffering merely from sensory aphasia treated as lunatics," on account of their inability to understand what is said to them, and to express themselves correctly—a course which he considers entirely inappropriate.

It has probably happened to every physician engaged in the treatment of the insane to have the insanity of some of his patients called in question, and when he mentioned delusions, hallucinations, and perverted conduct, to be met with the reply: "Oh, I know his mind isn't right, but I don't think he is crazy." From the scientific point of view, is not such an expression as much justified in the case of those confined in hospitals as of those who are at liberty? It would, of course, be entirely logical to limit the term "insanity" to some particular disease, but, in our opinion, that has never been done. Is it at all probable that the mental affection of Dr. Mercier's case, for instance, is the same disease, with a case of stuporous melancholia? To us it seems that to say that people who suffer from morbid emotional disturbances, hallucinations, illusions, delusions, or dementias, general or special, are not insane because the cases are not pathologically the same with other admitted cases of insanity, is like saying that a man whose blood is saturated with bile is not jaundiced because his condition is due to gall-stone or malignant disease instead of catarrhal obstruction.

That there are many cases of mental derangement which do not warrant the seclusion of the patient does not warrant us in characterizing their subjects as sane. There are all sorts and degrees of insanity.

The unscientific conception of insanity, as a distinct disease, has not even the merit of being practically convenient. Whatever may be the relations of that large proportion of mental derangements concerning the pathology of which we know little or nothing, no one will pretend that ordinary cases of mania and melancholia, general paretics, epileptics, and senile demented are all suffering from the same disease. Every alienist knows that some varieties of mental derangement tend to recovery and others are, from the start, incurable by any means with which we are acquainted. And still people go on compiling statistics about the increase and the

curability of "insanity," as if, to use our former comparison, statistics should be published as to the curability of jaundice without respect to the cause of the obstruction.

Moreover, the lumping together of the most diverse affections as varieties of a single disease has serious practical disadvantages. On the one hand it leads to the commitment to hospitals of persons who could be properly cared for at home, because they are called insane; on the other, to the exclusion from the benefits of hospital treatment of persons who need it, because of the stigma attached to insanity as a hereditary and not wholly curable disease. Let it be generally understood that mental derangement may proceed from a great variety of causes; that no one can be at once mentally deranged and sane; that many persons are committed to hospitals for the insane for mental disturbances that are neither hereditary nor incurable, and much progress will have been made toward inducing both physicians and friends to treat each case on its merits.

Take, for instance, the cases of sensory aphasia mentioned by Dr. Reynolds. It is absurd to say that a person to whom his native language is an unknown tongue, which he can neither understand nor speak, is of sound mind. His mental infirmity is of a much more incapacitating nature, so far as self-support is concerned, than some forms of acknowledged insanity. If his friends are unable to care for him, why should he be denied the benefits of a hospital, when the only alternative is the poor-house?

The hospital treatment of the insane is like hospital treatment of other classes of invalids, a matter of convenience. The great majority of mentally deranged persons are not called insane, and are, properly enough, treated elsewhere, but if any one is in a condition in which such treatment would be of advantage to him, it is neither scientific nor humane to deny him the needed help because we happen to know something more of his disease than the mere fact that he is mentally deranged.

W. L. WORCESTER.

DANVERS STATE HOSPITAL.

OCCASIONAL SUMMARY.

CALIFORNIA.—The State Asylums of California at present number five, and contain about forty-five hundred patients. This indicates a greater progress in State care than is seen in most other States of the Union.

CONNECTICUT.—The annual report of the Connecticut Hospital for the Insane at Middletown shows that on September 30, 1895, there were 1,683 patients being cared for—797 men and 886 women—at a cost for the year just finished of \$289,857. The percentage of recoveries on admissions was 18.42.

INDIANA.—At the last session of the Indiana Legislature a law was passed requiring the wardens of each State prison to report to the Governor all cases of insanity among the inmates. The latter shall then order the warden to convene a lunacy commission, composed of two medical men, one of them the prison physician, and two local justices of the peace, who shall examine the prisoner and report in writing to the warden, who shall transmit the report to the Governor. The latter has then to decide as to the disposal of the insane convict, to determine whether he shall be transferred to an asylum and which one, and whether it shall be with a pardon or parole, or to be returned when cured. The convict shall have the benefit of his time while in the asylum, and if not reported recovered at the expiration of his sentence, he shall be discharged from the prison rolls and due notice of the fact given to the asylum authorities. In case of recovery prior to expiration of sentence, notice is to be given to the Governor, who shall order his return to the prison. In all other cases his dismissal shall be in accordance with the laws governing the discharge of persons from insane asylums.

The law is apparently quite full and explicit in its provisions, and the status of insane convicts should raise no specially troublesome questions.

ILLINOIS.—The plans of the two new State hospitals at Peoria and Rock Island have been made.

—It is reported from Elgin that the dairymen of that section are considerably alarmed at the statement of Dr. Trumbower, State Veterinarian, that in his opinion 50 per cent of the dairy cattle thereabout are afflicted with tuberculosis. Of thirty-three cattle belonging to the State Insane Asylum which were submitted to the tuberculin test, fifteen were condemned, and all of them were fat, sleek, and apparently healthy. Five of those pronounced diseased were slaughtered, and tuberculosis was found to exist in a pronounced degree in all. Abscesses as large as a man's hand were found in the lungs, and the lymphatic glands and the lungs were thoroughly permeated with tuberculosis.

It is also reported that a considerable number of the State cattle at Kankakee have been slaughtered for the same reason.

— The Chicago papers remark that only a comparatively small number of the recent graduates of the Chicago medical schools have competed for the internships in the State hospitals.

MASSACHUSETTS.—We take the following summary of that portion of the latest (17th) annual report of the Massachusetts State Board of Lunacy and Charity as refers to the State institutions for the care of the insane from the editorial columns of the *Boston Medical and Surgical Journal* of February 20th:

“The Worcester Hospital for the Insane has appointed an accomplished pathologist and continues a good example of hospital management, and the Asylum for the Chronic Insane is as well managed as it can be with its bad location in the heart of the city. The Taunton has established a training-school for nurses and has infirmary buildings which are models of their kind, but lacks sufficient land for employment of patients. At the Northampton, old-fashioned ideas regarding hospital management prevail and there is little scientific study of insanity, but the institution is an excellent home for the insane. The Danvers Hospital uses mechanical restraint less and padded rooms more than others, has appointed a pathologist, and its training-school for nurses is in its sixth year, but it is not, with all its excellencies, quite up to the highest standard of neatness, nor is the individual study of the patients carried to the extent that it is in some of the other hospitals of the State. The Westborough is still sadly lacking in some of the essential features of a good hospital for the insane in spite of all that has been accomplished in an old building, and as to its high recorded cure-rate, the use of the word ‘recovered’ depends upon the point of view.

“The Hospital for Dipsomaniacs and Inebriates remains about as a year ago, and more efficient methods are recommended. It is still in the experimental stage, so to speak. The School for Feeble-minded, with its 423 in the school or in custody, needs more room to extend its admirable work. At the Hospital Cottages for Children a fair amount of good work is done for its 105 inmates, in spite of the somewhat unsatisfactory construction of the buildings. The new McLean, a corporate hospital for the insane, is highly praised. For the two institutions for the Boston insane, much remains to be done before the patients are properly provided for. No criticism is made of the eleven private insane asylums with their aggregate of 101 patients.

“As to the general care of the insane, the recommendation of the board has resulted in the appointment of special pathologists at some of the hospitals, with a prospect of more. It thinks the number of assistants too small in most of the hospitals and that there should be medical internes in all of them so far as is practicable. It recommends homes for the nurses, and suggests them for the superintendents, outside of the hospitals, approves training-schools for nurses, and cordially notes the great improvement in the medical treatment of the insane. The commitment laws are far from satisfactory in several particulars, and a thorough revision of them at an early day is advised.

“The insane under supervision at the end of the year were 6,768 of whom 5,763 were in asylums and hospitals, 803 in town almshouses, and in many

cases not only not receiving suitable care, but sometimes even being cruelly neglected, and 202 in private families.

"During the year, acts of the Legislature have been passed establishing an asylum for insane criminals and a hospital for epileptics."

—The State of Massachusetts has established at Monson, in the quarters of the old State Primary School, a State institution for epileptics. It is organized as a State hospital, and is intended to accommodate at present some two hundred inmates, who are to be adult epileptics, not criminals, inebriates, or violently insane. It can also receive voluntary epileptic patients as well as those regularly committed, but in other respects than its special character it will be under the same general regulations as those governing the State hospitals for the insane.

MINNESOTA.—Provision was made by the last Legislature of Minnesota for a fourth hospital for the insane; a special provision was that it should be located as near as possible to the cities of Minneapolis and St. Paul, and another that it should have a special ward for insane criminals. The commissioners appointed to prepare plans and acquire a site were also ordered to consider and report on the cottage plan and methods for the institution.

NEBRASKA.—The peculiar expressions in the report of the superintendent of the Norfolk Hospital for the Insane have been editorially noticed in this issue. A special telegram from Lincoln, the capital of the State, to the Chicago papers of April 21st, states that Governor Holcombe has ordered an investigation of charges against the head of the institution that were preferred several weeks since. The resignations of himself and the steward were asked for by the Governor, but the superintendent demanded an investigation for personal vindication.

NEW YORK.—The New York City Insane Asylum passed under the care of the State on February 28th, and its legal title became the Manhattan State Hospital. The following were nominated as its managers under the new condition of things by Governor Morton, for the stated terms of service: Henry E. Howland, seven years; George E. Dodge, six years; Eleanor Kinnicutt, wife of Dr. Francis P. Kinnicutt, five years; John McAnerney, four years; Isaac N. Seligman, three years; Alice Pine, two years; and George S. Bowdoin, one year.

The number of patients cared for in the combined institutions under the new name is about 7,000. The cost to the State for their care is estimated at near \$100,000 per month.

The city offices of this hospital were opened in the Metropolitan Building, Madison Square, East. The office hours will be from noon to 4 P. M. A steamer will leave the foot of East Thirty-first Street on Mondays, Tuesdays, Fridays, and Saturdays, at 2 P. M., to convey visitors to patients. On Sundays special permits will be required.

—*City and State Still at Odds Over the Insane.*—A serious clash has arisen between the city and the State authorities in regard to the recep-

tion of insane patients. When the insane were transferred from the care of the city to that of the State the State Commission issued an order that no patients should be received into the Manhattan State Hospital unless they were provided with a complete outfit of entirely new clothing. As this would involve an expense to the city of about \$15 for each patient, amounting altogether to from \$50,000 to \$75,000 a year, and as there was no provision for this expenditure, the Commissioners of Charities declined to comply with the order, which they regarded as entirely unreasonable. Consequently no patients were sent to the State Hospital, and as a result the insane wards at Bellevue Hospital soon became overcrowded with patients awaiting transferal to Ward's Island. Finally, when the accommodations at Bellevue had become taxed to their utmost capacity, the Charities Commissioners secured a peremptory mandamus from Justice McLean, of the Supreme Council, directing the managers of the State Hospital to accept P. T. O'Donohue, an insane patient from Bellevue Hospital, whether provided with new clothes or not. This was to be made a test case, and on March 20th, O'Donohue was taken to the Manhattan State Hospital on Ward's Island. The authorities then promptly sent him back to Bellevue, and the Charities Commissioners, acting under the authority of the Corporation Counsel, refused to again receive him. Consequently, the man was set at large, and, it is said, found his way to his home in Hoboken. On the following day the Charities Commissioners sent sixteen female patients to the Manhattan Hospital. They were allowed to land on the island under protest, but the hospital authorities, acting under the direction of the State Commission in Lunacy, refused to admit them to the hospital, and they were suffered to remain in the grounds without any adequate protection from the weather, and without proper supervision.—*N. Y. cor. Bost. Med. and Surg. Jour.*, March 26th.

PENNSYLVANIA.—Provision was made by the Legislature of Pennsylvania, in 1895, for the more immediate relief, care, and support of indigent insane persons committed on criminal charges less than felony. It is to the effect that upon such commitment, when any two physicians of at least five years' practice shall certify to his insanity, it shall be the duty of the County Commissioners, with the approval of the Court of Quarter Sessions of the county, or one of the judges thereof, within fifteen days after such examination, certification, and approval, at the expense of the county, to remove such indigent insane person to the proper hospital for the insane, there to be maintained at the expense of such county, as indigent insane persons are now kept and supported, until the proper legal settlement of such indigent insane person can be ascertained and determined.—*Journal American Medical Association*.

—The Pennsylvania Hospital for the Insane (Kirkbrides) has nearly completed a two-story addition, containing accommodations for fifty patients. A bath-house has also been built with full equipment for special hydrotherapeutic treatment.

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